

THE CULTIVATOR.

NEW

"TO IMPROVE THE SOIL AND THE MIND."

SERIES.

VOL. II.

ALBANY, MAY, 1845.

No. 5.

THE CULTIVATOR

Is published on the first of each month, at Albany, N. Y., by
LUTHER TUCKER, EDITOR AND PROPRIETOR.

ONE DOLLAR A YEAR.

SEVEN copies for \$5—FIFTEEN copies for \$10.00—all payments to be made in advance, and free of postage. All subscriptions to commence with the volume.

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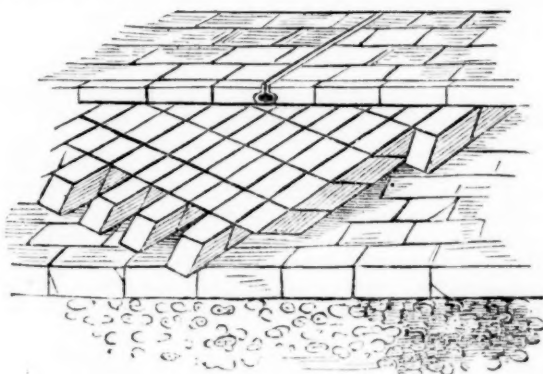
Foreign Correspondence.

MR. HORSFORD'S LETTERS—No. III.

Wood Pavements in London—Journey from London to Giessen—The Vineyards of the Rhine.

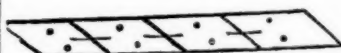
Giessen, Germany, Dec. 1844.

MR. TUCKER—In Oxford street, Cheapside, and several other streets of London, the wood paving is so excellent that I inquired the nature of the materials used, and gave a little time to ascertaining the manner in which the blocks are prepared and laid down. Deal is sawed into six inch square scantling, and then the scantling sawed diagonally into blocks. These are then pinned together in parcels about a yard square, and additional strength given by a system of little staples. The larger parcels are then laid down and also firmly bound together. Alternate rows are inclined in opposite directions, and the blocks are set diagonally across the street. The bed upon which the pavement rests, is rendered exceedingly firm by excavation to the depth of three or four feet, and then filling with stone first and then sand.



[Fig. 47.]

Fig. 47 shows the pavement, and the foundation. It presents also the blind gutters, a cast iron trough, a cross section of which is given in fig. 49



[Fig. 48.]



[Fig. 49.]

Fig. 48 shows the mode of connection by staples and pins.

The paving with wood is extending through the great thoroughfares, and I was told, would probably replace the stone from the Bank to Regent's Park, in a few years. It differs from the pavement in New-York in three particulars which I now remember. The blocks are smaller, of a different shape, and differently disposed. They are inclined, while the blocks of the pavement in Nassau street, and generally all that I had before seen, are vertical. This alternate leaning in one direction and the other, would prevent displacement, while it would permit the rain, not descending to the gutters, an easier passage between them.

The stone pavements are generally better than those of New-York and most American cities, in that the blocks are rectangular, presenting a more uniform and flat surface, than can be made with round stones.

From London bridge, I embarked in Her Majesty's steamer Earl Liverpool, for Ostende, at three o'clock in the morning. A passage of thirteen hours brought me to the Belgian wharf, and I was on the continent. The land is just above the surface of the sea, and it was no easy task to distinguish in the mist of the evening, the outline of the coast from a thousand phases the sky near the horizon sometimes assumes. Ten days in England, had extinguished the capacity of being surprised at any thing novel. Here were the high pointed roofs of which there remain a few humble representations in Broadway, Albany. Soldierly in uniform at every step: the hotels! what a chasm between them and those we had just left. Whole congregations of people going from morning service in church, to pass the day in fishing and their various avocations; females engaged in almost every kind of manual labor, with spades and hoes and baskets, as well as the less severe kinds of service; all these seemed quite as a matter of course, and it is difficult to recall the impressions produced by them at first sight.

The rail-road arrangements for the safety of baggage, were good; a ticket was pasted on the trunk, and a duplicate given to the owner of the baggage; and as with the "check" plan with us, no farther care was required. The cars do not compare with those recently introduced in America, between Boston and Albany, and between New-York and Philadelphia. At every crossing place of a highway, we found a man in uniform and in wooden shoes, behind whom a cross-bar shut up the road. Long rows of low trees seemed to divide the fields and farms from each other. Windmills for grinding corn, and for pumping surplus water beyond the dykes, were constantly in view. I counted sixteen at one time in the range of vision from one side of the car. Here and there, a great pile of bricks in the form of a mansion, from which avenues, through rows of trees, lead in various directions, seemed the residence of a Belgian nobleman. The cultivation with rude plows and spades, appeared to be pretty thorough, though I could tell little about it from the rapidity of our movement, and particularly from the lateness of the season, (Nov.)

In approaching Brussels, at the conclusion of a four hour's ride, I saw the first considerable hill on the continent. Ghent, which we passed somewhere about half way from Ostende, is upon a knoll, elevated a few feet above the surrounding plain. Brussels rewarded very

richly, the day we were able to give it. The beauty of the park, near which

"There was a sound of revelry by night,
And Belgium's capital had gathered there,
Her beauty and her chivalry; and bright
The lamps shone o'er fair women and brave men."

is exceeded by nothing I had previously seen. Its statues, bowers, walks, and lofty trees, were perfectly in keeping with the rows of beautiful buildings all round. Nearly all of them are white, being covered with a kind of stucco, which gives to them an expression of great neatness. The Cathedral is a stupendous pile, upon which every body remarks as a matter of course. The Town Hall is equally an object of attraction. The manufactories from which the famed Brussels lace is derived, are open to strangers; and the poor girls, whose skill in the production of the exquisitely fine articles, is attained by working in rooms from which nearly all light is excluded, may be seen at their toil.

From the capital of Belgium for many miles toward Liege, the country is very similar to that between Ostende and Brussels—low, plain, well tilled, irregularly shaped fields of yellowish loam. Liege occupies the inclinations about a grand amphitheatre, and is the commencement of a section of the Vervier railway, upon which are most beautiful specimens of architecture, in bridges, tunnels, extended embankments, &c. I am safe in saying there could not have been less than twenty tunnels, and some of them a full mile in length, in the section between Liege and the Prussian frontier at Aix La Chapelle. The viaducts are of hewn stone, and were massive and tasteful in the highest degree. It served to remind me of the "cut" through Mt. Washington, eastward from Pittsfield, though the Vervier railway has been constructed at a far greater expense.

The crossing of the confines of Prussia at Aix La Chapelle, is characterized by the examination of luggage and *visiting* of passports. Charlemagne's resting place, we had no time to see, and we were denied a visit to the interesting points about this town, as well as Waterloo and Cologne, by the fact that the fall course in Chemistry at Giessen, had already been in progress a fortnight.

At Cologne, a most strongly fortified town, I looked for the first time upon the Rhine; a stream with low banks, and about as wide as the Hudson at Catskill. From Cologne to Bonn, the banks are skirted through much of the distance with trees, and the scenery is about as interesting as that along a bayou in Texas, or a canal in a prairie. On one side, a tow path, along which, horses to the number of eight or ten, (eleven in one instance,) are walking with a long boat in train. The vessels are laden with all kinds of merchandise, coal, &c., and are on their way from the lower towns on the Rhine to Coblenz, Mayence, and the intervening villages. Besides these, freight boats, (which are supplied with masts and sails,) there are skiffs and barges, long and narrow, which seat from twenty to thirty men, women and children, in addition to provisions and luggage for a long voyage. Of the rafts of timber on the Rhine, every body has heard, and many have doubted the accuracy of representations. Several that I saw were of such gigantic dimensions, that I almost fear to name them. On one, there were about fifty men, whose labors consisted in directing the course of the raft. Dwellings, in which the relief watch ate and slept, were erected at four different places on the raft, and its whole area must have been three hundred by four hundred and fifty feet. The guide books mention them as being manned by from 400 to 500 men, but I saw nothing like so many. The number is probably augmented to this extent when the raft reaches the lower Rhine, and is rowed instead of being floated and merely guided. Pigs and poultry, with the stock of provisions, are kept on board. The timber is from the sources of the Rhine. It consists of straight trunks like masts, and is cut on the tops of mountains about these tributaries, where it is made to slide down, after the manner of the log and board slides on the Alleghany and Genesee. In addition to the tow path, there is on the left bank, a fine McAdam road, commenced by the Romans.

At Bonn, the vineyards first appear. This is a walled town, and the seat of one of the first Universities on the

continent. Here Schlegel was a professor; and here now, is Godfreys, the writer upon organic remains, whose compeer in America, has the Palæontology of New-York in charge. There are here other agricultural productions more numerous than the vines, but as the river is ascended, the proportion of land appropriated to the growth of the grape increases. The vines are permitted to grow to the height of about three feet, and are each tied to a rod of the same altitude. The rows are not more than two feet apart, and the individual grape vines in each row, much nearer. All the leaves were quite yellow in the advanced season, and the fruit had been gathered about a month previous. Some of the grapes which I procured, and from which much of the light wine about Bingen is expressed, were very like the Summer Sweet Water in flavor, though less in size. From a few miles above Bonn, all the way to Mayence, about a hundred and twenty miles, the hills and mountains are every where overspread with vineyards. Where the hills are very steep, the declivity is terraced; and I counted in one place thirty-six stone wall terraces, one above another. There are indeed few hill-sides not terraced. In some places, the grape vines are grown in baskets, which are filled with muck and lodged in some niche of a cliff. Zigzag pathways extend from bottom to top, and along these, I saw numbers of the peasantry carrying the earth with which to sustain the vines. This labor I understand must be frequently repeated, or the grapes are unproductive.

Will your readers fancy a wider and deeper river than the Hudson, flowing through continuous *Highlands*, for a hundred miles. Then all these Highlands from the base to the summit, and as far up the lateral ravines as the eye can reach; nothing but rows of grape vines and walled terraces; then these rows of vines having a direction corresponding to the most direct line of descent, in order, I suppose, that the rain may readily flow away; then a distinct limit to every five or six or twenty square rods, marking the possessions of a single individual, and giving the appearance of a beautiful garden without bounds, and they may have some idea of the vintage of the Rhine. I stood with my friend, all absorbed with these features of the scenery, but subdued with the associations that crowded upon me, I looked upon others, as immortalized in Childe Harold, and renowned in history from before the Christian era to the close of Napoleon's career. The passes, the castles, towers, fortresses, the ancient towns so numerous as to scarcely afford time for enumeration as you pass them—cannot be described. Here is a fortress from which a robber compelled vessels ascending the Rhine, to pay tribute. It caps and flanks a mountain, as if Anthony's Nose, near West Point, were tunneled and walled and crowned with stupendous masonry. Here is the place where Constantine saw the cross; here the convents of the times of the Crusades; here the castles and towers of the feudal ages; here the road that Cæsar and his legions trod; and here an abutment of his famous bridge; and here—but I cannot write of them. I have determined upon passing a part at least of my next summer's vacation among the vineyards and wonders of the Rhine, between Cologne and Switzerland, when I shall hope to learn among other things, the secret of the vine culture. Truly yours, E. N. HORSFORD.

MR. MITCHELL'S LETTERS—No. V.

Trip from Liverpool to Jersey—The Markets—English Farmeries—Food of Laborers, &c.

St. Hilliers, Jersey, Feb. 1, 1845.

LUTHER TUCKER, Esq.—In my last, for Liverpool to Gravesend in closing paragraph, read "Liverpool to Plymouth;" and for "vines and pruning hooks of France," read "orchards and dairies of Jersey." The change of arrangement was made after dispatch of letter. The road to Birmingham, was gone over mostly in the dark of the morning; it not being fairly light in that latitude, till after eight. The grass, I could see, was yielding to the unusual severity of the winter, and assuming the yellow tinge of ours in October. Nor were there wanting, along the way, evidences of bad management, such as foul grass lands, straggling hedges, and imperfect tillage;

contrasting very strangely with the richness and order that encompass it. Sheep, feeding upon turneps, checked off by light wooden hurdles, into patches of a few rods square, were frequently seen throughout the country. Perhaps 20 confined to a patch; the fat sheep being turned on first, the store sheep following, and the remaining bottoms grubbed up with the hoe. Your readers must remember, that there is scarce a day in thirty of a British winter, in which the ground is not as soft as in May; and cabbage beds are made up, and brocoli transplanted under the winter solstice. I saw "Prime Ohio Cheese, just arrived," placarded in a shop window in the center of Birmingham! The market was well stocked with meats and with fish in abundance. From Birmingham to Worcester, was gone over in the evening, but next morning, had (for a wonder in England,) a clear sky, and an April air, to look about the market.

Every man who sells meat in England, pays for a license, and he who sells meat, has no authority *ex officio* to sell fish. Hence, in nine cases in ten, the porkman has no veal, and the poulterer no beef, and the vegetable vender none of either. Each has his own stall, numbered and ticketed, and wares displayed before him in most seducing shapes; from a single chop for 3d. to the leg for twice as many shillings, from a penny-worth of beef to the red and golden quarter, from a two-penny bunch of celery, to the bunch for half a crown. So I found them on that Saturday morning, (market day) at Worcester. Every avenue about the market house, and the streets in the neighborhood, were lined with country people, (most of them women,) who had come in upon their donkeys, or in horse carts; some with eggs, some with cabbage; all clamorous for the sale of their commodities. That effected, the shop-keepers, or the stall women, who display all sorts of finery under a range of sheds near by, would relieve them of the few pennies resulting from their sales, and by the middle of the afternoon, the donkeys and the horse-carts are pouring in every direction, home. I was much struck with the peculiarly white appearance of the poultry, of which there was a profusion; the heads were left on, and passed under the wing; the feet also remaining, and trussed ready for the spit. The butter was rich to the eye, and the prettily stamped half pound cake, on my breakfast table, rich to the taste. The Herefordshire beef is preferred in the market, and the Yorkshire cows, I was told, were held in most esteem for the dairy.

Worcestershire is famous for its hop culture; 4,000 acres in the county being annually devoted to that crop. The "Hop market" is a large area, enclosed by high brick walls in the center of the city. On the way to Gloucester, the road passed through some of the plantations. Nothing was at that season to be seen but the poles compactly arranged in stacks, about the fields, and thatched over. The farm houses and cottages in the neighborhood of Worcester, are of every conceivable shape, all thatched, and presenting every variety of peak, window, and chimney top.

In the afternoon, I walked through Spetchley Park, in the neighborhood, and took occasion to look about a quiet farmery stowed away in one of its corners. The buildings screened on three of their sides by thickets of evergreens, and arranged in very picturesque, though as it appeared, very serviceable disorder. The more recently erected of them, were of brick or stone, and slated, the others thatched; all in trim order. The farm house would have been a model in America for fancy town cottages; though its shape sat most gracefully upon its own green plat, (which lies before the door of every cottage in England,) and was separated by a light wood paling, from the broad park beyond. I approached the buildings through the rick yard, where were some dozen of large stacks of wheat, barley, beans, &c. set up two feet from the ground upon stone pillars; underneath, the poultry were scratching after the dropping kernels. In the barn, two laborers were threshing wheat upon a slate floor, with flails similar to those in use with us. Before I left, the threshers suspended labor for dinner; and what was it? Half a barley loaf, and a bit of cheese!—this eaten, squat upon the straw, and moistened with a jug of water, and cut in pieces with their pocket clasp knives.

This is no joke; it was their dinner; and yet a stone's throw away, lay the three hundred acre park for old oaks to fatten on, and herds of deer to dance over, and scores of hares to trip about, and breed, and die upon. Let our farmers and farm laborers, thank Heaven that they are not set down within the range of such odious contrasts. And yet, and it is a shame to every man in America, who has a spot of land and a soul—these same laborers, dining on barley bread, will save enough of time and of means, to put out the sweet brier at their cottage window, to train the ivy up their chimney side, and to keep the grass green and velvety at their door. What for? Do you say what for? "*Out of the ground, made the Lord God to grow every tree that is pleasant to the sight.*" But I must make another letter regarding stall arrangements, drainage, &c., at this farm of Mr. Berkeley's, and half a dozen, I fear, out of a week spent in Devonshire. My next, however, shall be of Jersey.

Yours truly,

D. G. MITCHELL.

MR. NORTON'S LETTERS—No. X.

Multiplication and Analyses of New Manures—Guano from a new locality.

Lab. of Ag. Chem. Association, Edinburgh, Feb. 27, 1845.

MR. EDITOR—As the mind of the agricultural community is becoming fully aroused to the necessity of employing every available means for producing and sustaining a high state of fertility in the soil, it is a natural consequence that the varieties of manures should increase with the demand; and that as new light has been thrown upon the subject, attempts should be made to imitate nature by artificial mixtures. More especially has such been the case in this country since the discovery of guano and the application of nitrate of soda and other saline substances. The farmers certainly cannot fail for lack of a variety from which to choose. Advertisements of artificial guanos better than the natural, of patent inorganic manures, of admirable seed steeps, meet him on every side. Judging from these highly colored pictures, no land can much longer remain barren. A few hundred weight per acre will remedy the worst evils.

Fortunately for the farmer, he is not now obliged to trust wholly to the professions of interested parties; for in chemical analysis rightly applied, he has a weapon fatal to imposition. I may as an illustration, give an instance which has lately fallen under my observation in this Laboratory. A manure entitled the "Cornwall Patent Manure," has attracted much attention for some months past, and circulars have been distributed, setting forth its virtues in unmeasured terms. One of them is before me, in which it is said "to have an admirable effect upon wheat, oats, barley, beans, peas, cabbage, potatoes, turneps, carrots, &c; to be an excellent top dressing for grass, and with the rain water, to form a solution destructive to animal life, destroying grubs and worms, to possess all the essential qualities of phosphate of lime, with the advantage of exerting a powerful chemical action in decomposing the rocks and soil, thereby affording potash and soluble silicates."

These are only a part of its alleged virtues, and it must be confessed that they make a goodly show. Unfortunately, however, for the credibility of such statements in this part of the country, a sample of the manure was sent by a gentleman not connected with its manufacture, to this Laboratory for analysis. The result was as follows:

Carbonate of lime,.....	69.76 per ct.
Hydrate of lime,.....	9.37
Sulphate of lime,.....	0.43
Common salt,.....	0.34
Oxide of iron,.....	1.67
Alumina,.....	1.93
Water,.....	0.65
Insoluble siliceous matter,.....	15.46
	99.61

What a falling off is here. We have every reason to suppose that this was a fair average specimen; if so, this boasted manure is seen to be no better than some of the best marls. A great portion of it is probably shell sand, and it will be especially noticed after the above puff, that there are absolutely no phosphates. The whole bears

evidence of having been subjected to heat, and in the insoluble part, there were some small white lumps of fused substances which seemed to indicate that a little silicate of lime or soda, had been added. An analysis of this manure has been made for the company by some chemists at Liverpool, and their report is quite favorable. They especially mention the favorable effects to be expected from the soluble silicates; now it happens that there are no soluble silicates. They probably obtained silica by fusing the insoluble portion, but that silica existing as silicate of lime in the manure, was not in a state to be immediately taken up by plants. Without in the least degree impugning the skill of these gentlemen as chemists, it may be doubted whether they have any knowledge of agricultural chemistry. The science often suffers in this way from the assertions of those who have not sufficiently studied its laws. There can be no doubt that artificial manures may be made equal to the natural; and when the farmer learns to guard himself by the light of well directed science, the dealer will be forced into honesty.

I have spoken above of the silicate of lime. This is a combination of silica (or quartz,) with lime. It is in some rocks present in large quantity, and slowly decomposing, furnishes a constant, though not abundant supply of both silica and lime. Prof. Johnston in his Lectures, p. 608, speaks of the first slag which is obtained at the iron smelting furnaces; it consists almost entirely of silicate of lime. He recommends that this be broken up and spread over the soil where lime is scarce. In a peaty or boggy soil, where vegetable acids abound, it would decompose more speedily.

As I am upon the subject of manures, I may give the analysis of a guano from a new locality, Saldanha Bay, within the British possessions at the Cape of Good Hope. It contains

Water.....	3.92 per ct.
Organic matter and ammoniacal salts.....	24.70
Common salt and sulphate and phosphate of soda and potash.....	8.77
Phosphates of lime and magnesia.....	61.15
Insoluble siliceous matters.....	1.27
	99.81

This guano is light in color and dry, like the Peruvian, but differs greatly both from that and the Ichaboe, in its composition. The quantity of ammonia is small, but there is a very large proportion of phosphates. Its action would not be so immediately perceptible as that of the other kinds, but might be expected to continue longer. It is said to cover 7 or 8 acres of ground, to the depth of several yards. The papers state that vessels of all nations are permitted to load there after obtaining a license at the Cape. Yours, &c. JOHN P. NORTON.

Domestic Correspondence.

ITEMS OF AGRICULTURAL SURGERY.

1. **DYSPEPSIA IN A ROOSTER.**—Some years past I observed my children playing with a large rooster, that with other poultry had been removed from the country to the city, and became a pampered animal, like many other bipeds who take little exercise, feed high, and live without work. Upon approaching the group of children who had possession of the bird, it was discovered that he could not stand although his crop was full. On attempting to place him on his feet, he repeatedly fell forward with the weight of his crop, which was distended and hard from the amount of its contents. Presuming that his stomach wanted relief from indigestion, and not knowing how an emetic would work, I took a sharp knife, cut a hole in the crop and emptied it of its contents. It was then washed out with clean water, and the incision sewed up. The fowl being placed upon its feet, immediately flapped its wings and walked away. The materials removed from the crop measured a quart or more, consisting of whole grains of Indian corn, oats and water melon seeds, which, from the commencement of putrefactive fermentation, smelled very offensive. This state of the crop caused me to wash it out clean before sowing it up.

2. **A COW SAVED.**—On the 2d of March 1842, I was called up early in the morning by one of my men, who stated that we were about to lose a cow. On repairing to the barn, and the enclosure where the animal was confined, a three years old heifer, appeared to be in the agonies of death, from her efforts to expel her first calf, which presented breech foremost. She lay on her side with her feet extended as if exhausted with the exertions of the preceding night. She raised her head, and gave such a look as I never before saw in a dumb beast. It was expressive, penetrating and imploring, and I interpreted it into the words, "*do help me.*" What's to be done? said my man. Why help her to be sure. The cow had evidently been struggling all night, and nothing but the tail of the calf had yet appeared. How will you proceed, said the assistant. Thus, was the reply. Do you take hold of the tail, and I will endeavor to get one or both hands between the thigh and body of the calf, and when the cow makes an effort, we must draw gently downwards. The animal was so much exhausted that her pains were feeble, and at long intervals, but by patience and perseverance, we succeeded after two hours attention, in relieving the cow, but the calf was strangled by remaining so long in the birth. The poor creature was now prostrate and overcome, and there were no after-pains to expel the secundines. After waiting a reasonable time to give her rest, and seeing no prospect of their expulsion, I introduced the hand and extracted them.

In the course of the day we found that the animal could not stand or use her legs, and lest they should become stiff as she lay, we trussed her up by means of an old sacking-bottom under her body as oxen are trussed up when being shod. Her feet were left touching the ground but she did not use them until the fifth of March, three days after her delivery. The unusual presentation in this case, weakened the loins of the cow, and altered her walk, from which she gradually recovered. I still possess the creature, and she has since had a living calf.

I have been informed of a similar case which occurred on another farm, in which the owner fixed an iron hook between the body and thigh of the calf, then tied a rope to the end of it, and three men by main force pulling upon it, delivered the animal, but killed both cow and calf. This occurrence, which was known to my assistant, caused him to think at first that my cow was also to be sacrificed.

3. **PROLAPSUS ANI, OR COMING DOWN OF THE INTESTINE IN HOGS.**—In the month of January 1844, my assistant in the case of the cow, informed me that we should lose two of our best store hogs, out of a litter of eight, being three quarter Berkshire shoats, between four and five months old. The intestine in both cases had descended and bulged out of the body as large as a man's fist. They were immediately removed to a small out building where they could be shut up and kept warm by themselves. The first operation was to hold up their hind feet, and wash with warm water the protruded intestine, and then to grease it with warm tallow. A man continuing to hold the animal by its hind feet with the head down, my two thumbs were gently pressed upon the gut until it began to yield, and in two or three minutes it was returned into the body. The creature struggled and strained so hard that it came down again several times, and was as often returned in the same manner, sometimes requiring an additional thumb or finger of a third person to overcome the resistance caused by the straining of the hog. External pressure was then made with a roll of rags, confined to the part by a bandage around its body and between its legs. It was then shut up in the dark and supplied with clean dry straw to lie upon. This process was applied to both.

On looking in upon the patients two hours after, they informed me, that the pledget and bandages were uncomfortable, and that they had taken the liberty of rubbing against the building, and had got them off. I could not scold at the unruly animals whose sensibilities are about as acute as the thickness of their skins. So as the intestines had come down again, I called my assistants, and tying together the hind feet of the young porkers, we secured them to the side of the building in an elevated position, so that they could touch the ground with the fore

feet, and after returning the guts once more, left them in that position. My two men had now become so accustomed to the operation, that they acted without my aid. We left the shoats standing heads down, an hour or more until they were perfectly tame from fatigue in standing in such an unusual position. And when they were released, they nestled in the straw and went to sleep. Nothing was given to them the first day but a little drink, and next day some Indian meal gruel. They recovered, and at the end of the year made heavy pork.

4. COW LOSING HER HORN.—On New-Year's day, 1845, one of my cows in fighting another with a fence between them, caught the horn in the rail and completely separated it from the pith. I was absent at the time, but my man who acted as assistant surgeon in the cases of the cow and the shoats, and who thought he had learned something from a book farmer, undertook to practice on his own account. He concluded by reasoning on the nature of things, that as the horn was made to cover the pith, the pith ought to be covered, especially in winter. He accordingly shut up the cow by herself, and looking around, found the horn beside the fence lying on the ground, and as cold as a stone. It was replaced, and he went to my farm medicine-chest, and taking therefrom a roll of sticking plaster, spread long strips of muslin with it, and wound the strips around the base of the horn. The result was, that next day the horn became warm at the base, and gradually extended upwards until the whole assumed its natural temperature. The plaster adhered more than a week, and upon examination at that time, the horn was found to be united. It is now three months since the accident, the horn is firmly fixed in its natural position, and the cow is well, and running at large with the others.

If these facts and observations will be useful to any one of the agricultural community, please to accept them from your friend,

RICHMOND.

Staten Island, March 28, 1845.

NOTES OF A TRAVELER—No. I.

Botanical Notices—The best country for Sheep.

MR. EDITOR—In March 1842, I left the southern part of Alabama with a horse and buggy for the purpose of making a botanical tour among the mountains of Tennessee and North Carolina. Already many flowers were in bloom; the woods and trees were green, and all nature looked gay and smiling. Among the flowers, the yellow Jasmine, (*Gelsemium sempervirens*), *Bignonia capriolata*, the dwarf horse chestnut or small buckeye, (*Æsculus pavia*), Carolina allspice, (*Calycanthus floridus*), many species of Phlox, *Silene Pennsylvanica*, and numerous others, were of frequent occurrence. On the top of the mountain south of Huntsville, two or three miles from the Tennessee river, were numerous small trees in flower, and among them the *Rhus cotinoides* of Nuttall. This beautiful tree is scarcely distinct from the *Rhus cotinus* of Europe, so frequent in cultivation at the north. Its leaves are larger, and it often attains a greater size than the cultivated species, some trees being from 30 to 40 feet high. It was originally found by Mr. Nuttall on the high rocky banks of the Grand river in Arkansas, and these two localities are all that are known to botanists. It is well worthy of cultivation, and owing to its elevated situation it would be apt to succeed well in our climate. In the vicinity of Huntsville, I first saw fields of red clover; neither this or timothy flourish well much south of that latitude; they being unable to withstand the long dry summers of the low southern country. Here I met with an old northern friend, the Dandelion, (*Leontodon taraxacum*), which gave rise to sweet recollections of home, and the scenes of childhood. The common locust, (*Robinia pseudacacia*), is indigenous to the mountains near Huntsville, and is also frequently met among the Cumberland mountains and the mountains of North Carolina. On passing into the State of Tennessee, hay was offered for the first time to my horse; he being a native of South Alabama, had never seen the article before, and showed his displeasure by throwing back his ears and shaking his head, but finally ventured to eat sparingly of it, though ever after he preferred corn fodder.

Tennessee is so remote from market, and provisions are so abundant, that the price of produce is perhaps lower here than in any other State in the Union, consequently traveling expenses through this State are cheap indeed; there are few sections of the United States through which the traveler who has his own conveyance, can go with so little expense. Many of the inhabitants of middle and eastern Tennessee raise horses, mules and hogs, for the southern market, which are generally driven into the cotton growing States during the month of December, and sold to the planters. I passed through middle Tennessee to Sparta, near the base of the Cumberland mountains, on the stage road leading from Nashville to Knoxville. Here I ascended the mountains and drove along a table land until I descended the mountain again at Kingston, it being more than 30 miles across. This table land abounds in streams of pure water, and is clothed with grass and weeds, among scattering trees and shrubs resembling the oak openings at the west. These mountains, as well as those of North Carolina and Georgia, are well calculated for the summer pasturage of sheep, and as such, are well worthy the attention of wool growers. On the elevated table lands of the mountains of these States, sheep would have a healthy range, abounding in pasture, and never failing springs of pure water. They could be wintered in the low country near the mountains, at comparatively little expense owing to the mildness of the climate, and be summered on the mountains at a cost not much exceeding the wages paid a shepherd, since the price of mountain land is trifling, and it can often be had for the mere expense of surveying. There the pure mountain air and water, and change of scene, would cause the animals to be strong and healthy. Sheep delight in hilly and mountainous districts, where they are not oppressed by the scorching rays which the sun pours upon the plains. If we look at the history of sheep we will find that they have always flourished best in hilly and mountainous districts; therefore it is not probable that the wool growing business will be profitable on the western prairies, because there is too much sameness in the scenery, and often the want of pure water and air, besides during the summer season, the prairies are often parched by drouth, when the grass becomes dry, affording little nutriment, and then it stands ready to be, and is sometimes consumed by fire. At such seasons, every one knows that sheep would not have a sufficiency of shade, food and water. I allude more particularly to the middle and southern portions of Illinois, and I speak from impressions made in a tour through that region in the dry summer of 1838. I cannot help thinking that the middle and eastern portion of Tennessee, the western part of North Carolina, and northern part of Georgia, has greater natural advantages for the raising of sheep than any other portion of the United States. I spent the summer season exploring the mountains of those States, and may give you some further account of them in future letters.

Yours truly,

S. B. BUCKLEY.

West Dresden, Yates co., N. Y., March 22, 1845

SCOURS IN SHEEP.

This malady is one of the worst complaints that attack the flock; as soon as discovered, the diseased animals should be removed from the flock and kept fasting at least twenty-four hours without any food. Then commence by feeding them in small quantities, ripe hay; coarse timothy is as good as any; keep them up on ripe hay until you are satisfied the disease has abated. This is the most simple and surest method I ever tried.

Fresh feed, grass or hay, may cause this complaint, and when thoroughly commenced among the flock, it may spread by contagion; therefore a shift of place and feed is obviously necessary.

If the hay be brined once or twice each week through the foddering season, say, dissolve one pint of salt in three gallons of water, for a flock of fifty, it will prevent the scours, and is one of the best methods of winter management, if fed in mild weather, that can be recommended for sheep.

S. W. JEWETT.

Weybridge, Vt., 1845.

NOTES OF TRAVEL IN THE WEST—No. III.

BY SOLON ROBINSON.

At the close of my last communication, I think we had just begun to get among the mineral hills of Missouri. And what can we find in this rugged, uncultivated, and almost uncultivable district, to interest the readers of an agricultural paper, when the only staple is that same heavy commodity with which guns and brains are sometimes alike loaded? I have to hope that my present leaden article, may not be thought to emanate from a brain overfilled with that substance, or that I shall infuse such a quantity of the arsenical vapor that arises from the smelting furnaces, into this letter, that I shall kill off my friends who have traveled with me thus far. But we must proceed. These rocky hills and mountain sides have to be climbed, before we can reach that rich and sunny southern clime where we hope to find more matter of a practical kind to interest the agricultural reader. I wish I had been favored with that branch of education that ought to be taught in all schools, and I would give you here an interesting view of an "old Spanish house" that I passed this day, January 21st. There are many of these old houses yet to be seen in this country, but they are fast disappearing. This one was only different from many others, that it must have belonged to one of the aristocracy of olden times. It was perhaps an hundred and fifty feet long, one story high, elevated upon high stone pillars, a wide portico the whole length, under which were the several entrances to the different apartments; that into the center hall, being fitted with very wide, massive paneled doors, the windows small, roof steep and ornamented by three high peaked projections or turrets, in the face of which were small windows or loop-holes, that look as though designed to reconnoitre for savage foes that might be lurking in the romantic valley of this location. The valleys of this region are all fertile, and ever will continue to be, while the limestone hills continue to disintegrate and send down the best of manure. Col. Snowden, a gentleman whom I met with to-day upon one of these rich bottom farms, tells me that he raises as fine hemp as he ever raised in Kentucky. I also was informed by Dr. Cooley, (with whom I dined,) another gentleman in the same valley, who lives upon an "old grant," that the long and continued cropping of this land had no perceptible effect upon it. In buying an "old grant," a man has a great advantage over one who enters land surveyed by the United States, because the old settlers having no rigid rules to confine them to straight lines, have run them in all kinds of curious angles so as to make up the amount of their claim entirely of the best lands contiguous.

At Hillsboro, the County seat of Jefferson county, I very unexpectedly met with a warm friend of agricultural improvement, who not only reads himself, but induces others to subscribe for such papers; and yet this man is not a cultivator himself, but as is often the case, is a much more efficient friend of every thing that tends to improve the condition of that class than they themselves are. The reason is soon told. He reads—and what is all important, he knows just enough to know that he yet can learn more. The most difficult class to contend with, being those that already know so much that they cannot be taught any more. This gentleman, John S. Matthews, Esq. clerk of the county, has a very fine cabinet of minerals, nearly all of which he has collected himself. It was here that I saw some beautiful specimens of shell marble, quantities of which exist in the neighboring hills, and which might be profitably worked. He also showed me some specimens of cannel coal of excellent quality, from the Osage river, where it has lately been discovered, and will prove of great value to the prairie region of the west, it being much lighter for transportation, and answering in the place of charcoal for mechanical purposes.

Mr. Matthews informs me that the oak ridges of this country, which are at present but little cultivated, are very fertile, and the north sides invariably the most so; and that they produce as great a borthen of blue grass as any land that he is acquainted with. Here then is another "good country for sheep." Yet none are here, for no one has money to buy sheep in a country where silver turns to lead; and often stays turned. For although fortunes are sometimes made by mining, yet taken as a class, the miners are not as well off in the world, as those who follow the slow and sure road to comfortable independence in the cultivation of the earth. Jan. 25th, I visited one of the largest mining establishments in this part of the State, and at present yielding probably the most lead for the amount of labor employed, of any one in the United States. It is known as the "Mammoth Diggings," and is situated in Jefferson county, 55 miles south-west of St. Louis. The method of hunting for mineral is this: a man goes upon any land where the external appearances indicate mineral; in fact it is often found in small quantities upon the surface, and commences "prospecting," that is, digging holes 3 or 4 feet in diameter, and more or less deep as the prospect induces, and if he discovers lead, then he goes on "proving" until he finds whether it is worth following, or till the lead give out. The whole country is full of these prospect holes, some of which prove barren, and in others, the miner discovers mineral enough to pay him for his labor, but the "prospect is too poor" to induce him to penetrate into the solid rock below the earth and loose stones near the surface, and he abandons that spot and goes to another, in the hope of eventually making a "discovery," which will lead to quick and certain fortune.

But in this, as I will soon illustrate, as in agriculture, it often happens that a steady and untiring perseverance in the "old diggings," continually turning up the earth a little deeper, would lead to more certain fortune than an abandonment of the old and familiar ground, for a new beginning upon an untried soil, when like the desperate gambler, we place all upon the cast of a single die. At this "Mammoth Digging," some poor fellow about 15 years ago, was within a foot of his fortune; but he was a surface skimmer, and knew not the value of subsoiling; and so he missed the crop that since has been

made. But to explain. Some 18 months since, a boy in the neighborhood, who was out "prospecting" among the rugged hills, begun digging out one of these old holes, and in a little time discovered the "blow out" of the mine beneath. This lead being followed up, and the earth and rocks removed a few feet further, opened into a cave lined all around the sides and arch with immense masses of ore, to the amount of one hundred thousand pounds, and so pure that it yielded 75 to 80 per cent of pure lead. And here again is a lesson to encourage perseverance; for after this cave was exhausted, the work was suspended for some time, till at length a small lead was discovered, that lead into a second cave of equal size and richness, and from that to a third one still better, and when I visited the diggings, a single blast of powder had thrown open a passage into a fourth cave which by some, was supposed to contain 300,000 pounds, but I think that amount may be divided by two, which still leaves an immense mass to be exposed to one view. The opening of the cave is in the side of a hill, and the descent so gradual, that the ore is brought to the surface in wheel barrows, where it is cleared of the adhering rock, called by the miners "tuff," a white metallic substance which I am unable to name correctly. It is probably a corruption of tufa. It is then hauled to the furnace, where the operation of smelting has been so simplified within a few years, that I believe I can "tote" fuel enough to melt a thousand pounds of lead. The fuel is dry cedar chips and charcoal, which is mixed with the broken mineral in a furnace holding a bushel or two, and the fire kept in blast by a blow-pipe, driven by a steam engine. In other locations, water power is used. The extent this digging has penetrated into the hill, is about 200 feet, and there is no telling how long they will continue to discover other caves. At other diggings, caves have been found in larger numbers, but lesser size, and much further from the surface.

Some diggings are dry, others so wet as to require a steam engine to pump out the water. Large quantities of mineral have been found in different places in "clay diggings" near the surface. This mineral clay is almost red, very unctuous and very productive. The ore in the clay is in detached cubular masses. In the caves, in globular form—in the rocks, in sheets, varying from the thickness of this paper, to two feet, and these veins are sometimes followed down into the rocks by blasting an hundred feet deep, always with the exciting hope of finding a mass. Many of these mines have been worked for a long time. Those at a place called "old mines," for forty years, by the French residents who still occupy the place, and from the appearance, in the same log cabins they did at first. But those at "Riviere La Motte" in Madison county, are the oldest, there being still an unsettled claim upon the tract, by the heirs of Rino, a Frenchman, who was here in the employ of the king of France in 1723, but as is now supposed, looking for silver instead of lead. There is a large amount of business done at these mines by a poor looking population who work without the hope that animates the class in other places, as here they are all tenants, and have to give the proprietors of the tract of land, which is I believe 3 miles by 6, one-tenth of all their earnings. There is now here ten smelting furnaces for lead, and one or two for copper are building. Cobalt, nickel, and manganese ores are also found here. The southwestern part of Missouri is rich in mineral wealth, but shows few examples of agricultural wealth; and the mining population are of that class that every thing that comes light goes lighter, and they live to day, and live poor too, with no thought of the morrow. Now although money may be sometimes easier made by mining than farming, it is an uncertain business, and does not seem to produce so good a state of society as that old fashioned mode of making a good living at least, in the cultivation of the earth. But the business withdraws an immense amount of labor from cultivation, and profitably employs a large amount of capital, and furnishes a market for all the surplus produce of the few farms in the mining region. I must not forget to mention one of this class who I found in the vicinity of the Mammoth Diggings, Willard Frissell, Esq. whose rich and well cultivated farm has enabled him to live free from the temptation of mining some of the rich mineral hills which skirt the fine bottom land that he has in cultivation. Having long been a reader of the Cultivator, I found myself warmly welcomed as an old acquaintance, and rested with him over a lovely sunny day, the last Sabbath in this month. But I have to charge this man, and I doubt not the charge will fit many other readers, with a failure to profit by what he has read. His only water is "toted" up a long steep hill to the house from a spring at the foot, when right by the side of that spring runs a stream of water, that if applied as directed by Mr. Bennett, would bring a constant supply from the spring to the house, and as "time is money," would save enough every year to pay the expense. Reader—I mean you, don't apply it to your neighbor—have you profited by what you have read, any better? If not, now is the right time to do so. If you have no spring to make run up hill; I'll bet a bucket of cool water you have as well as hard as lime can make it, and no cistern to make your wife look so good natured "wash day."

Jan. 27th. A warm spring-like rain detained me nearly all the forenoon. This is the first "sprinkle" since I left home, which proved rather a hard one in the course of the day; for lured by false appearances, I undertook to drive a dozen miles over a road that the very thoughts of is enough to make the bones ache, of one who is accustomed only to the smooth prairie roads. But patience and perseverance accomplished the task and before the next morning, the rain turned to snow and for the first time this winter, coated all nature in a white mantle about two inches deep, that soon melted in the morning sun, making as fine a compound of snow and mud and water as ever was mixed together. At Old mines, I saw as fine a young apple orchard as ever grew, proving what might have been proved long before, that the country is well adapted to raising fruit as well as lead. The owner also showed me the benefits of manure as well as lime, upon this limestone soil. By the use of lime, the finest crops of grass can be raised, and many of the hill sides could be set with fruit trees, that are unfit for cultivation.

Potosi is the county seat of Washington county, built of course like all other towns, upon seven hills; for here there is not level ground enough to build scarcely one house, much more a town upon. At this place I was shown a well dug through a bed of lead ore, and was assured that this mineral never injures the water, all of which must come more or less in contact with it. Near Potosi, I visited the farm of John Evans, a good English farmer, who has proved that fruit trees, grass and sheep, will flourish in this part of Missouri, if they can have a chance. At a Frenchman's where I staid over night, I learned a new way to build a barn in a country where saw mills are few and very far between, as is the case here. I will describe it for the benefit of new settlers in general, and some folks in particular.

A row of cedar posts, being first grooved on each side, are set in the ground about five feet apart, and in these grooves are fitted puncheons of any convenient width, the edges resting upon each other, which forms the sides of the barn. Upon the top of these posts, the plates and roof are put. The partitions are all made in the same way, so that there is no sawed stuff and no nails except in roof and doors, and it makes a very good cheap building. The grooves are cut in the posts by a tool made on purpose, shaped like an adze. The plan is worthy the attention of new settlers in many situations that I know of. It will answer very well for making "cheap sheds" for some of the prairie flocks and herds. And now, my dear friends, while I take another rest, let me beg you to have patience, we travel slow, but we have much to see, and life I hope will be long enough to see it all. So once more, I am affectionately your old friend,

SOLON ROBINSON.

DITCHING—COTTON CULTURE.

EDITOR OF THE CULTIVATOR—It affords me great pleasure to inform you that I have succeeded in reclaiming my swamp lands by draining, which has rendered them not only safe for fine crops, but their value I now rate very high. I am now engaged in repairing and deepening the ditches I cut last winter, and locating a few smaller ones required. The work has been executed by my own laborers under my directions, and the ditches will compare with any dug by Irishmen. The time employed, I conceive the most advantageously spent of any work bestowed on my plantation. True, the last summer was very dry, but notwithstanding we had a very heavy rain in April, and one in August, which would have left a sufficiency of surface water to have injured the growing crop, had not the waters been conducted off by my ditches. Our winter rains prove their efficacy, as the fields are rid of waters which heretofore stood on the lands. I have accurate and well finished plates of all my swamp fields, with their ditches and ponds thereon, which I would forward on to you, was it not for the expense of the mail, which would give you an idea of the utility and correctness of the work. My stiff swamp lands, that I was apprehensive would not be materially benefited by draining, owing to their tenacity of absorbing water, have by far exceeded my expectations. My ditches, with the aid of a few water furrows, have rendered such lands, as I heretofore despaired of, in my opinion, after a few good plowings, the most productive, and the best quality of cotton is being made on them. Your treatise on draining in your August number for 1844, I examined with great delight, in comparing its instructions with the work executed; and the plan fig. 68, page 241, same number, is an instructive lesson of what I am to undertake, in reclaiming a piece of low land surrounded by high, for the season of 1846. I made one attempt in cutting off a spring on a hill side, which partially answered the desired purpose. My mistake was in placing the ditch a little too high. Experience in this case, shows that where the wet land commences, occasioned by such springs, the ditch should be located a few feet below where the spring emerges, so as to absorb the first springs, and by the depth of the ditch, it cuts off the lower springs. Had I proceeded in the work accordingly, entire satisfaction would have been the result. In examining the ditches of most planters, and such heretofore has been my own mistake, the ditches are all too small, for after a few heavy rains, they become so filled up, as to render very little benefit; but where a ditch is sufficiently large, it not only keeps itself clear, but drains more rapidly and effectually, and requires less attention in keeping them in order.

So much towards ditching—now for cotton. It is an article at present nearly worthless; but as regards its culture, we may say something. Two of my friends and neighbors experimented on Dr. Cloud's method—good lands, well prepared, and well managed throughout; and

I am sorry to say I was greatly disappointed in the result. These gentlemen who tried that system, are good planters, energetic, and indefatigable; and they left no stone unturned, in giving it a fair trial. They intend the coming crop, to try it again. One perhaps reached 2000 lbs. to the acre; the other hardly reached that amount. I planted against the former, on the old drill system, and I beat him. His trial was on ten acres, according to Dr. Cloud's method; I placed eighty acres against it, on the old system, acre for acre, or an average against the ten. By this statement, nothing is intended against Dr. Cloud's system, for I am of the impression, it must increase the product of land, and I candidly believe the season of last summer in this section was unfavorable to manured cottons, owing to the drouth it experienced. I manured some fifteen acres of my own in the drill culture, which was by far the most inferior cotton I had, and no doubt the drouth in a measure caused the disappointment in the above crops. One great difficulty they had to contend against, was in procuring a stand, which in the end could not be obtained with no less than four separate plantings, which was against their crop.

Owing to the very low price of cotton, there is some talk among the planters of trying tobacco, as our neighbors, the Floridians, have made the last season a small test of its product, and are so well pleased with the results, that the present year they are going into it on a large scale. Something must be done, for at present rates, the cotton planter is not remunerated for his labor and plantation expenses. The evil I presume will work its own cure.

JNO. H. DENT.

Eufaula, Ala., Feb. 1, 1845.

FEEDING CALVES.

MR. EDITOR—I have noticed several articles in the Cultivator upon rearing calves. I will just give you my plan, with results.

Feed and growth of a Calf.—Calved Jan. 19th, 1843—weaned at six weeks old, and weighed 220 pounds. One quart of Indian meal, and one quart of middlings were boiled together and mixed with eight quarts skimmed milk, with which he was fed morning and evening, with as much hay and carrots as he would eat for three weeks and five days, when he weighed 276 pounds—gain 2 1-13 pounds per day. He was then fed with 2 1/2 quarts Indian meal boiled, without the middlings, for 18 days; weighed 326 pounds; gain per day, 2 7-9 pounds. Meal increased to 3 quarts; fed 22 days; weight 377 pounds; gain 51, or 2 7-22 pounds per day. I do not write this boastfully, for it may be beaten; but if any of my brother farmers have a mind to try the process, I do not hesitate to assure them in advance, they will not find it as great a humbug as manuring potatoes with 4 barrels of poudrette to the acre, or using a penknife blade instead of a shovel to put the manure in their corn hills.

Oyster Bay, L. I., March, 1845. D. K. YOUNGS.

TO PREPARE SHEEP FOR SHIPPING.

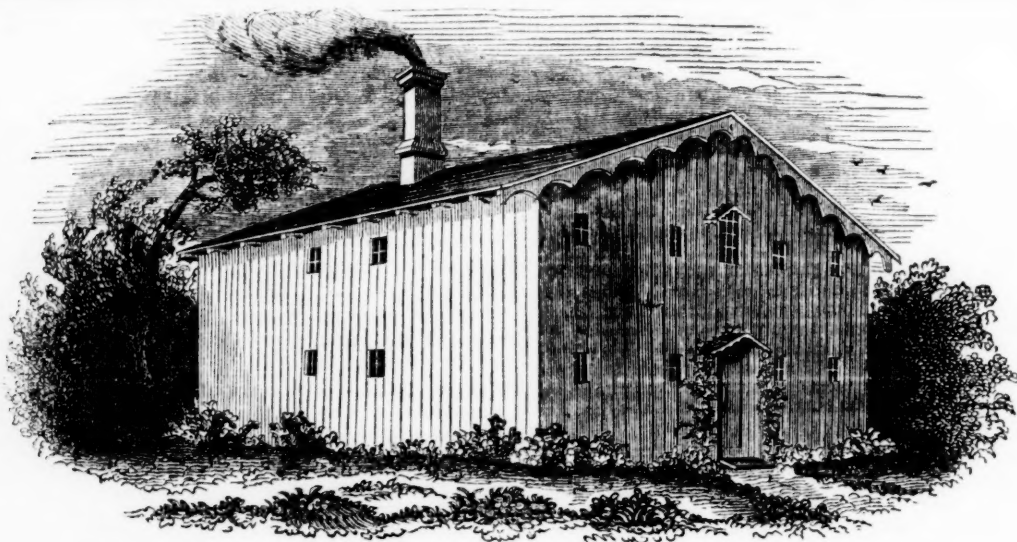
Sheep should be fed on hay a day or two before they are shipped, to change the nature of the dung, and thus prevent their becoming filthy when confined in small quarters. They should also be fed with grain one week at least before they are shipped, and also on the route, oats or other grain, regular twice each day.

The best kind of hay should be selected, and after it has been moistened a little, twist it into a rope as hard as it conveniently can be made, and wind it up into tight balls or bundles and pack it away at a little distance from the pen of animals.

By this method, the hay not only occupies the least possible space on the boat or cars, and is easily handled, but it is kept as fresh as possible, a very important thing in feeding. A small rack or box should be prepared for feeding, and cut off the hay rope for them as occasion requires.

S. W. JEWETT.

The quantity of poultry exported from Dublin to England during the Christmas week, amounted to five hundred tons, and was worth 50l per ton.

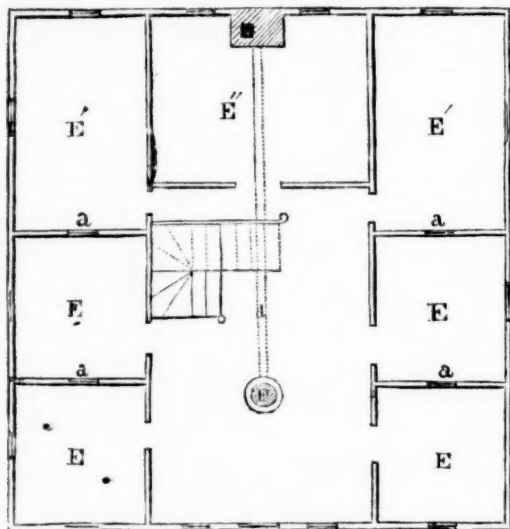


ECONOMICAL DWELLINGS FOR PLANTATION LABORERS—(Fig. 50.)

TO THE HON. J. S. SKINNER:*

MY DEAR SIR—I have availed myself of the earliest opportunity, which a pressure of business would allow, to prepare a brief description of the buildings erected in 1843, by my father-in-law, the late VIRGIL MAXY, Esq. as quarters for the field hands and their families, employed on his farms at West River, Maryland, which I promised to furnish you with when I last had the pleasure of seeing you in Washington; and I now have the honor to transmit to you, at the same time, drawings of one of these buildings, (the two being essentially alike,) exhibiting it in plan, side and front elevation, and in perspective. For these very artistical drawings, I am indebted to Mr. J. G. Bruff, of the Topographical Bureau, Washington. They are in some respects inaccurate, as will be seen from the text.

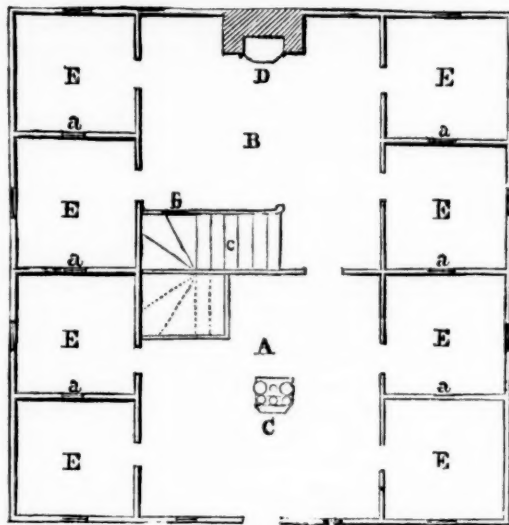
The perspective view presents a very exact picture of one of these houses, and the plans I trust will be readily understood. One of the buildings is surrounded by groups of large and venerable locust trees, with a pump of pure water near the front door. The other stands in the vicinity of a beautiful grove, and numerous young trees have been recently planted around it, as well for ornament as for protection from summer's heat and winter's cold; while a copious and never failing spring of cool and delicious water gushes out of a ravine hard by. Both houses are so situated that the down fall water drains from them in all directions.



Ground Plan—[Fig. 51.]

EXPLANATION.—(Reference to Ground Plan and Second Floor.)
A. Kitchen—B. living room—C. cooking stove—D. Franklin stove—
E. E' E'' dormitories—E' and E'' family rooms—F. drum—a. lat-
tices for ventilation—b. closet—c. stairs—d. pipe of drum.

* Furnished for the Cultivator, by Mr. SKINNER.



Second Floor—[Fig. 52.]

The house (to which the drawings, refer) is 34 feet square, on the ground plan, from outside to outside; and from the bottom of the sills to the top of the plates, is 16 feet high. The sills rest on stone walls, (laid in cement) sunk 2 feet below the surface of the ground, and rising one foot above it. The rooms on the ground floor have a pitch of 10 feet including the joists—the upper rooms are therefore 6 feet high to the eaves or top of the plates, and rise to the height of 10 feet along the roof. The large room E' and the open space adjoining it, have a uniform pitch of 10 feet. All the rooms on the second floor are lathed and plastered over head. Those on the ground floor have no ceilings, below joists.

The sills and posts are of white oak—the former, 12 inches square, the latter, 8 by 7 inches. The plates are of white pine, 8 by 7, and the rafters of the same materials. The frame has no braces, the exterior covering rendering them unnecessary, and at the same time imparting to it great strength and rigidity. This covering or siding consists of 2 inch white pine plank, (commonly called ark-stuff, and costing at Port Deposit, about \$8 per M.) jointed and spiked vertically to the frame. The joists are covered on the exterior with narrow slats or buttons of the same materials. The roof is rather flat, covered with white pine shingles, and projects from the walls about 30 inches all round. It is also provided, as will be seen from the drawings, with a simple kind of barge-board, cut in a rough way from pine planks.

The ground floor is formed of cement. The space within the sills and foundation walls is filled with clay, *hard rammed*, to within about 2 inches of the top of the sills. On this sub-stratum, the cement is deposited. It consists of a mixture of 10 parts, irregular brick fragments,

rather less (in the average) in cubic contents, than black walnuts, 5 parts of clean sharp sand, and 3 parts of the best hydraulic lime. If the cement is not of the best quality, the fragments should be reduced to 8 parts; oyster shells, when convenient, may be advantageously substituted for brick-bats.

The cement and sand are first thoroughly mixed, care being taken that no more water is used than is just sufficient to produce a slight cohesion; the great mistake is often made of employing too much water. After the mixture has been well worked, the fragments are added, with a little more water if thought necessary, and *thoroughly* incorporated with the other ingredients. When fit for use, the mass must present a perfectly homogeneous appearance. This condition of things is essential to success. It is then to be immediately removed before it has time to *set*, to the place which it is to occupy, to be deposited in a layer sufficiently thick for the purpose designed, and hard rammed with quick short strokes, until it is quite solid, and gives no more under the rammer. This operation will bring a good deal of water to the surface, from what had seemed to be a mass of materials but slightly moistened. After the whole floor has been formed in this manner, and before it has time to dry, it is *sluiced* with water, covered with clean straw, to retard evaporation, and at least twice a day for 12 or 14 successive days, deluged with water. At the end of this period, the straw is removed, and the floor is permitted to dry, when, if the cement has been of good quality, and all the operations have been properly performed, it will be found to be as hard and as firm as a solid rock, which no moisture can effect, no vermin penetrate, and that will wear as well as the best mica-slate pavement. To give it a smooth surface, it will be expedient to plaster it with a thin coating of *coal-gas-tar* sprinkled with sand. When this is quite hard and dry, the house may be occupied.

I have recently employed cement manufactured in the manner just described, for the floor of a meat house much infested with rats, with complete success.

A barrel of cement costs in Baltimore, \$2.25, and is sufficient with the other materials, to make about 168 square feet of floor, 2 inches thick.* It would, however, I think, be better to form the floor 3 inches thick, which would make the barrel equivalent to about 112 square feet.

There is but one entrance to the house, which leads into a room 16 feet square in which is placed a large cooking stove. This apartment serves as a kitchen, and communicates with a back room of the same dimensions, in which is fitted a Franklin stove for the purpose of affording an open and cheerful fire. This may be called the living room, to which the people generally retire on coming in from labor, and to dry themselves in wet weather; but when not at work, they usually occupy both rooms indifferently. They have each two windows of 6 by 10 glass.

On the ground floor are eight dormitories, opening into the large rooms, each 8 feet square. They are lighted by windows of 4 panes of glass, so arranged that they may be opened by moving the sashes aside.

An easy flight of stairs leads from the back room to the second floor—under the stairs is a back closet for the convenience of the cook. The landing place on the second floor is in an open space 18 by 12 feet. Into this space, the rooms of this story open. They are appropriated to married people and children. The four smaller rooms are 8 by 10 feet—the two marked E are 16 by 10 respectively, and the one marked E⁺ is 15 by 12. The whole of this portion of the building is kept warm and comfortable in the coldest weather, by a large sheet iron drum, heated from the cooking stove. From the drum, a pipe is carried to the chimney through the room E⁺. In each partition, separating the dormitories, on both floors, a *lattice* is fitted, ranging with the gable windows, and over each door is left a space 6 inches square for the purpose of ensuring a nearly uniform and agreeable degree of warmth throughout the building, in wet and cold weather, and a free circulation of pure and dry air

whenever the state of the atmosphere will permit the windows to be open. The vacant space in the 2d story is occupied by the children as a play room and for drying clothes in wet weather, and in summer, some of the boys prefer to sleep in it. As soon as the hot season sets in, the cooking stove is removed to a detached building, and is not brought back to its place till the return of cold weather. In the mean while, when necessary, a fire is burnt in the Franklin stove.

It will be obvious to the most superficial observer, that in planning this house, the leading objects have been comfort, economy, and the saving of fuel, in the accommodation of a considerable number of persons, rather than the study of architectural effect; and yet, as the perspective drawing shows, the *tout ensemble* is quite agreeable to the eye. This is owing to the good proportions of the building, the flat and projecting roof, and a slight degree of simple ornament. It still wants what may be cheaply supplied, a rustic porch at the entrance. This might be formed by entwining the boughs of cedar trees, inserted in the ground for the pillars, and covering them with creeping vines. These quarters afford more room for their occupants, in proportion to numbers, than the best permanent barracks usually extend to the soldiers of an army; while on the score of privacy, warmth, ventilation and general comforts, they are also superior.

Two objections may, with some propriety, be urged to these arrangements for the accommodation of laborers: 1st, the risk of fire—2d, the greater danger from contagious and infectious diseases. To the first, it may be answered, that there are but two fires in a house, and both of them on an incombustible floor. And to the second, that from the dryness and cleanly nature of the floors, and the careful ventilation which may be always attained with little trouble, there will be less liability to contract sickness, especially typhus fever, than if they occupied (as they too often do) small and badly constructed houses; and that if a contagious disease should break out on a plantation, it would be as likely to spread among the people, from the fact of their working so much together, in the one case as in the other.

The cost of these buildings was about \$700 each, and I am satisfied that similar structures might be erected in any part of the State of Maryland and Virginia far that.

Very respectfully, your ob't serv't,

GEO. W. HUGHES.

GROWING LETTUCE EARLY.

MR. TUCKER—Those who are fond of lettuce, usually desire to have it as early in the spring as possible, and before other products of the garden are ready for the table. An obvious means of procuring the article early, is the hot bed; but that is not convenient for every one; though materials for constructing the hot bed should be at command, the attention and watching which it requires may not in all cases be readily spared. This consideration led me, some years ago, to make it a subject of special inquiry, whether it was not possible to have early lettuce without the hot bed.

Lettuce, it was noticed, will bear uninjured, a hard frost; under some circumstances, that which comes up in the fall, will live over winter; in which case it will grow to a proper size for eating much sooner than the spring sown plants. It seemed natural therefore to conclude that we had only to protect it from very severe and long continued frost, in order to preserve it alive till spring. With this view, I tried covering it with straw, corn-stalks, stable litter, leaves, boards, mats, but invariably without success; it would all perish. This result was unexpected. What killed the lettuce thus protected? It could not be frost, for care was taken in each case to cover the lettuce so that it should not be exposed to greater cold than it endures without the least injury. Perhaps it was smothered: that is, deprived of a sufficient supply of air. But I had taken care, in one instance, to cover it with a box large enough to enclose an ample store of air. Yet here the lettuce died. While reflecting upon this subject, it occurred to me that the death of the lettuce might be owing to its seclusion from the light; which we know to be essential to the healthy growth of

* Coals, lime, &c., are usually sold by imperial *heaped* measure, which makes the bushel equal to 2.815 1-2 cubic inches nearly, and I think the barrel contains about 3 bushels, or 4 8-9 cubic feet nearly.

all plants. Upon this, I made a frame with sashes to fit; sowed lettuce in it in September; put on the glass, the latter part of November, and let it remain till March, when I had the satisfaction to find all the lettuce alive and flourishing. Whether my theory was correct or not, I thus ascertained the fact, that lettuce may be preserved over winter merely by a simple covering of glass. In the spring, the lettuce grew luxuriantly, and was fit for the table as early as it would be if grown in a hot bed. The plan of growing lettuce, suggested by the foregoing fact, I have followed for several years with invariable success. If you please, your readers may have the benefit of my experience, which I will give somewhat in detail.

In the construction of the frame, in which the lettuce is to be grown, I do not know that any particular size is material. In the climate of New Haven, it is requisite that the frame should be at least 6 inches thick; mine is made of cedar scantling, laid up like a log house, with a slope towards the south of one foot in five. A board is nailed over and on the outside of the scantling. The sashes should be made like those of a hot bed, with glass lapping, so that the water may run off. Common window sashes will be broke, by water standing on the panes and freezing. The glass should be thick, to prevent breaking by the weight of snow. For the same reason, the frame should be set where the snow will not drift into it. When the sashes are on, they should lie about a foot from the ground, which should have the same slope as the sashes. There must be a contrivance to fasten the sashes, so that they shall not be blown off by high winds, and also to prevent their sliding when the upper end is raised. The manure used in the frame should be well rotted and well mixed with the soil. The same soil will not answer well, for more than four years. As often as that, either the frame should be moved, or the soil taken out and replaced by fresh earth. The kind of lettuce which I think best for cultivation in this manner, is one of the cabbage varieties—the *white head*. It forms a solid head 6 to 8 inches in diameter. The time of sowing is the middle of September. It is sowed broadcast and raked in. The frame is left open till the setting in of winter—till the ground begins to freeze hard. The sashes are then laid on the frame, and remain undisturbed till the opening of spring. No watering is required during winter; nor is it necessary to admit the external air. The glass must not be covered. Snow may fall upon it, but it will not (in New Haven,) continue long enough to do injury. When spring opens, it will be necessary in clear warm days, to raise the upper end of the sashes 6 or 8 inches. When there comes a warm rain, the sashes should be taken off. If a suitable rain does not occur often enough, it will be necessary to give water in some other way. As the ground during winter, will have dried to a considerable depth, there must be, early in spring, at least one thorough watering, by rain or otherwise, deep enough to reach the moist earth below. As soon as the open ground is thawed, lettuce may be transplanted from the frame to any warm place. That in the frame must be thinned, if heads are wished, to 9 inches apart. If the frame is small, it will be best to leave the plants about 4 inches apart, and depend upon heads in the open ground. There the plants should be set 12 inches apart. It is a common practice to pick off for use the lower leaves. This will infallibly prevent the heading of the lettuce. In gathering the lettuce from the frame, it is better to cut it off at the surface of the ground, than to pull it up. The stumps will throw up sprouts, which produce the best of seed. Indeed it is almost impossible to procure seed, otherwise. If the head is left on, the seed stalk is so wrapped up by the leaves, that it commonly decays before it breaks through. Some of these directions may appear minute; but whoever attempts to cultivate lettuce in the manner here described, will find them important to his success.

The eating of the lettuce may be performed without any special instruction. But I may be allowed to say, that a little sugar with vinegar, forms a palatable dressing, for those who do not crave egg and mustard.

I think it probable that the *principle of supplying light in water*, may be advantageously applied in the case of other herbaceous plants, and to half tender flowers, and

even to cabbages. In respect to the last mentioned article, I would suggest to those who have old window sashes, to try the experiment by making their *eabbage hole* with *windows* that will admit the sun to the cabbages within. Roses and fig trees are well preserved under glass, in the same manner as lettuce, only the sashes must be higher from the ground.

NOYES DARLING.
New Haven, Conn., Feb. 15, 1845.

MANAGEMENT OF THE ORCHARD.

MR. EDITOR—Your correspondent's article on the management of the Peach orchard, (see Cultivator for Jan. p. 38,) has a strong advocate in the person of Mr. John Mason, tenant of John Gill, Esq. of Haddonfield, New Jersey, who cultivates a noble farm of 200 acres, upon which is an extensive orchard of apple trees of the finest kinds. In a late conversation with Mr. Mason, who is a native of one of the eastern States, and a very intelligent man, bred originally to a mercantile profession, he remarked,

"When I came here, I found that the orchard had always been kept under careful tillage, such management being considered essential to its well being, according to the generally received opinion; but I observed, that although the blossoming of the trees was abundant, the trees themselves soon become covered with the nests of caterpillars so thick as to give the appearance of hoar frost; while the fruit soon after began to drop off in immense quantities; what remained, being cankered, and almost worthless. I therefore determined to change the plan, and immediately laid the orchard down to grass, converting it into a hog pasture; only mowing the tall weeds that spring up during the summer, and turning in young cattle to graze occasionally. The next year there were scarcely any caterpillars' nests to be seen, the hogs picking up the fallen fruit, and destroying the malady in the bud. The year following, the evil was totally eradicated, the yield of fruit being of the finest quality, and enormous in quantity; and at present, I know no orchard so vigorous, or that promises so fair a prospect, whether for grass or fruit."

On accompanying him to the spot, I was struck with the neatness of the husbandry and the vividness of the pasturage; the thrifty state of the trees affording abundant proof of the justness of the theory practiced by my friend. The grasses were of the finest kinds, chiefly indigenous to the soil, the grazing and tramping of the hogs and young cattle having produced a close and rich carpet of the greenest verdure, and remarkably early in its growth also, for although but the 27th of February, the herd were already pasturing in it; while not a weed of last year's growth was to be seen, or any thing to impede the springing of the young crop. Upon this orchard, from sixty to eighty hogs, besides young cattle, were pastured the last year during the whole summer, which took good care of the fallen fruit; after which, more than 3,000 bushels of the choicest apples were fed to the former in the way of fattening, and for which they proved most valuable, saving a vast amount of corn.

Here I witnessed the justness of your correspondent's remarks. The orchard has become a hog pasture, where the weeds are kept down, and the necessary cultivation by tramping, has been performed far more profitably and economically than by the use of the plow; while the source of the caterpillar and the borer has been cleared away by the aid of a class of laborers whose wages have been paid in a measure by the food thus collected, at great profit and the most lasting benefit. In conclusion, and in justice to Mr. Mason's very neat and careful management displayed in this experiment, I must add, in no part of the orchard or elsewhere, did I observe a single instance of the rooting of the hogs while at pasture; all was level as a bowling green or a well trimmed lawn, with not a weed or a bush, even in the fence rows. What has been said, however, does not by any means militate against the mode every where adopted and pursued in this part of the country, of cultivating and cropping the orchard while the trees are young and small; this is a system differing in toto from that in question, which has been introduced for the purpose of preventing

disease, but which it is suspected, has proved the cause of much of the evil complained of. Nor is the laying down and sowing the orchard, to be too long delayed, the crop being far better adapted to grazing than mowing for hay, or grain.

I find that the system of "rigid pruning of the peach tree" has been adopted by the Messrs. Downing at their extensive nurseries at Newburgh, and no doubt it will be attended with success; the fact that "no tree bears the knife so well as the peach," having long since been ascertained and verified by universal practice in England. And to prove my faith by my works, I have taken off many leading branches the present spring, and find the trees much improved in appearance by the operation. The experiment has led to the inquiry, whether, as it is proposed to keep the orchard in grass as a hog pasture, the mode proposed would not admit of the trees being planted thicker or nearer together, depending on the system of "rigid pruning" to keep them within due bounds and with upright heads, affording a proper degree of exposure to atmospheric influence, and a due and equal proportion of sunshine? The question is an interesting one; would your correspondent take it up?

Your subscriber,

J. L.

Springfield, N. J., 1845.

ON BREEDING SHEEP.

MR. EDITOR—After looking over the pedigree of my sheep in the November number of the Cultivator, and some of the remarks at the close, I feel it my duty to give a fuller explanation of my views and experience in the breeding of sheep. It is the duty of wool growers to have three objects in view in breeding sheep—1st, they should breed that kind of sheep whose fleeces will be large enough to nett them a handsome income from the growth of their wool—2d, a kind that will produce a fine, long, and silky staple, which will be profitable to the manufacturer—3d, a kind which will, when manufactured, make a heavy body, and a durable goods for the consumer. I would here ask, is there any one distinct breed which will answer all these purposes? I know that the Saxon sheep produce fine wool, but not enough in weight to make it profitable to the wool grower.* It may be a profitable wool for the manufacturer, but I very much doubt the durability of the goods for the laboring and business part of community. The Paular Merinoes are heavy fleeced, and when well fed, have more native oil, than can pass through the harl of the wool in a proper manner—it is common for it to form a sticky substance among the wool, which makes it heavy and unprofitable for the manufacturer—they are somewhat wrinkled about the neck, and are apt to have hairs in those wrinkles, and not uncommon to have hairs on the body so as to prevent it being manufactured into fine goods, so that this kind of sheep will not answer our full purpose. It is more for our interest to grow *fine* wool in the Eastern States than it has been. We cannot expect to compete with the west on *coarse* wool. How can we grow a large fleece, of long staple, *fine* wool? I will tell you how it has been done, viz: by crossing three different breeds of pure Spanish Merinos. The most perfect of the three was the Escorial, and I believe the most perfect breed that was ever imported into America when imported by David Humphrey in 1802; in their pure state, their wool was more compact at the outer end than any that I have ever seen, and in possession of stronger felting properties. The one which was imported in 1811, was a larger fleece and a little darker at the out end of the wool. In selecting my bucks to breed from, I have even taken great pains to select those which partook most of the Escorial blood. Experience has taught me that in breeding animals, the offspring partake stronger in their outward coat and appearance of the male, in their temper and disposition of the female; in this way I have managed my sheep, until many of them resemble the Escorial sheep when in their pure state. In select-

ing bucks to breed from, we should take those that are of handsome form, large fleece, and long staple, in which the native oil circulates freely through to the outer end of the wool, leaving the wool within, white, like cotton. This kind of wool is free from *dead end*, cleanses easy, and is soft and silky when cleansed. That kind of wool which has a great deal of yolk lodged about in the wool wastes too much in scouring, and is very harsh and wiry and not easily manufactured into fine goods. Some gentleman in the Nov. number of the Cultivator, mentioned the *Escorial Saxon Sheep*. I have never seen any that were imported from Saxony, that bore any resemblance to those imported by David Humphrey. In Mr. Grove's letter to Mr. Colman, he states that there was an importation of Escorial sheep from Spain to Saxony in 1764, and another importation in 1777, of different breeds. This was 47 years before the introduction of the Saxony sheep to this country. I think it quite improbable at least that we have any of the pure Escorials from Saxony. Where are the 200 that Wm. Jarvis brought to this country in 1809, or their offspring? I know of no trace of the Escorial blood but what has been preserved from the importation of General Humphrey, and the one imported in 1811.

In looking over a communication of Mr. L. A. Morrell, in the April no. of the Cultivator, 1844, he assigns a number of reasons why wool of the same fineness would be some of it dry and harsh and some soft and silky. I think if he had raised the same breed of sheep that I have, he would have assigned a different reason. I will here repeat some of my remarks, and speak a little more particularly of the kind of sheep and wool which I have raised. The complexion of the wool is dark at the outer end, white within, is always soft, and after being cleansed for use, remains soft and oily. The reason I give, is this; it has been ascertained, and acknowledged I believe, that every harl of wool is a hollow tube; when the perspiration is open, the native oil passes through these tubes. This native oil preserves the life of the wool, renders it free from *dead end*, and leaves it in full possession of its felting properties; and I very much doubt, when cleansed for use, whether this oil in the centre of the harl is ever all extracted, for it always feels oily, and the goods made from it are soft and silky. This native oil has its desired effect. It preserves the health of the sheep, the life of the wool, and adds to the strength and durability of the goods.

Manufacturing men have sometimes found fault with this kind of wool because they are large fleeces; would it not be honorable in them to keep both *debt and credit*? If the wool wastes a little more in washing, and is a more perfect and valuable article when washed, the account is balanced. I am satisfied so far as the experiment has been tried, that there is no kind of sheep as profitable, uniting the interests of the wool grower and manufacturer. Some gentlemen are of the opinion that the Saxony breed of sheep should be kept pure, and not crossed with any other kind; but I think that a mistaken idea. I think there is a very great benefit derived from crossing different breeds. But we must have pure blood male animals to breed from. It is our duty as farmers to make all the improvements in the different branches of agriculture which we are capable of. The agricultural and manufacturing interests are closely linked together; whatever affects the one, affects the other more or less. We should endeavor to draw together, and work for each other's interests. The wool grower must breed a kind of sheep whose fleeces will yield him a living profit; we cannot live from the two pound fleeces; and while our manufacturers ask for a protective tariff, which they really need, and which we wish them to have, we wish them to remember that the farmers in the Eastern States need *protection* to. I will here leave my subject for the present for my worthy friends to correct.

Watertown, Litchfield co., Ct. JACOB N. BLAKESLEE.

WORKING OXEN.—At the last Fair of the Middlesex (Ct.) Ag. Society, four ox teams, attached to decorated carts were present, numbering 214 yoke, viz: Team from Middlefield and Long Hill, 96 yoke—South farms, 84—Westfield, 26—Joel Blatchley's, of Durham, 8 yoke.

* The remark in regard to the Saxon sheep not producing wool enough to make them profitable, we think is rather too sweeping. We could name flocks of Saxons, which have undoubtedly afforded good profits.—Ed.

IMPROVEMENT OF FARM STOCK.

MR. EDITOR—In a communication published in the June no. of the *Cultivator*, 1844, page 189, I endeavored to bring this subject before your readers, in the hope it might attract the notice and engage the attention of some of your correspondents, who can appreciate the importance of its bearing on the great agricultural interests of the country. It is believed that if this branch of agriculture should be brought to the test of a careful and critical examination, the result would prove that few even of those who are most interested have considered the magnitude of its importance. Entertaining this opinion, permit me again to present some remarks, having the same object in view, with the hope that others may take up the subject, and present arguments and facts, illustrating its importance.

In the remarks which I now propose to make, I shall confine myself to the subject of the improvement of *dairy stock*. The question then is, how can this improvement be successfully accomplished? It must be acknowledged there are some difficulties in the way, which should be met and overcome before any considerable progress can be attained.

One of these difficulties I apprehend, will be found in a lamentable want of interest, and an indisposition among the great mass of our agriculturists to fix their minds upon the subject, and engage in persevering and untiring action. Another obstacle, I apprehend, is a prejudice in the minds of many well meaning men, against what is termed "improved stock," without ever having really tested its merits. Formidable as these and other obstacles are in the way of improvement, yet when the mind contemplates the American character, its accurate discernment, its enterprise and its perseverance, when fully engaged in any pursuit worthy of its consideration, and when the understanding has become convinced of its practicability, who can doubt of ultimate and entire success?

With a view if possible, of directing public attention to this subject, and engaging others in active co-operation, I have recently cast my eye over the official statistics of the United States taken in 1840. By this public document, it appears that there was in the County of Rensselaer that year, a fraction of over 66,000 neat cattle; and as a basis for calculation, suppose one in ten of this number to be appropriated to dairy purposes, then the number would be six thousand six hundred. From the inquiry I have instituted, I am led to the conclusion that the dairy cows now in use in this State, do not average more than from four to five pounds of butter a week, for seventeen weeks, say from the 1st of May to the 17th of August. Call it five pounds, and the average product for 17 weeks of each cow, would be 85 pounds, and the total product from the 6,600 would amount to 561,000 lbs. which at 12½ cts. a pound, would amount to \$73,320.

As a still further illustration, by a reference to the same official document, it appears that there were in the State of New-York in 1840, 1,911,244 neat cattle. By applying the same rule as above, (one in ten for dairy purposes,) there would be in the State 191,124 dairy cows. Suppose the product in butter to be an average of 85 lbs. for each cow for the 17 weeks, the total quantity produced from the 191,124 cows would be 16,234,540 lbs., which at 12½ cents a pound, would amount to \$2,029,692.

Now if the milking qualities of the dairy stock of the county of Rensselaer should be improved so as to produce 10 lbs. of butter a week, for the period above stated, the product from the same number of cows would be 1,122,000 lbs. which at 12½ cents a pound, would amount to \$134,640, creating an increased amount of product of \$67,320 in the county of Rensselaer alone for the profit of those engaged in this branch of husbandry.

By an application of the same rule of calculation to the dairy stock of the State of New-York, the result would stand thus. The product in butter would be 32,469,080 lbs., which at 12½ cents a pound would amount to \$4,059,385, exhibiting an increased product to this branch of husbandry in the State of \$2,029,692.50 for the 17 weeks, and a considerably larger amount per annum. It

will be seen that if these calculations approximate to accuracy, the subject is of great importance to the agriculturists of this country, and can hardly fail to force itself at once upon every reflecting mind.

The question then is, have we a breed of cattle among us which will produce 10 lbs. of butter a week for 17 weeks of the most favorable season of the year, on pasture alone. My belief is, we have now in this country, dairy stock, among the improved breeds, which may be relied on to produce nearly or quite that result, and by careful, systematic breeding, it may be still further improved.

If this opinion be correct, it becomes an important inquiry, how is it to be made available? And what means should be instituted to promote and insure success to the undertaking.

From the reflection I have been able to give to the subject, I am inclined to the opinion that much may be accomplished through the medium of the State and County agricultural societies; and the fact should not be lost sight of, that the bounty of the State is contributed to promote this, among other kindred objects.

Should the State Society appropriate \$300 of its funds to premiums, fixing the highest at \$75, and graduate down to \$10, for the greatest quantity of butter made from a given number of cows, to be kept on *pasture only*, for a period of 30 or 60 days, it is believed such premiums would stimulate numerous dairymen throughout the State, to competition, as the premiums would be a compensation for the extra trouble attending the trial. It may be objected by some, that so large an amount could not well be appropriated to this single object; in answer to such objections, it may be said, the State extends its bounty for the improvement of agriculture, and it will be expected that this bounty will be so appropriated as to effect the greatest amount of improvement.

Time will not allow me to say all I intended to have done, but in a future number may resume the subject. In conclusion, permit me to remark, that to insure the greatest amount of benefit to this branch of husbandry, I cannot conceive any better plan than the one indicated above, as it will afford a wide field for competition, and the owners of the different breeds of cattle will have an ample opportunity to test their real merits, and then the great mass of farmers will be able to decide for themselves whether the Durhams, Herefords, Devons, Ayrshires, or Natives, possess the best dairy qualities, as this information would be spread out in the reports of the transactions of the State Society. This being faithfully done, each individual could not fail to be able to decide which is the best dairy stock; he could then make his selection understandingly, and improvement could not fail to be extensively promoted through the State and the entire Union.

C.

Troy, January 5, 1845.

INSECTS INJURIOUS TO WHEAT.

MR. TUCKER—During the summers of 1843-44, the wheat in this neighborhood had suffered considerably from the depredations committed by a small green worm about an inch in length; its head is brownish green, with two brown spots upon it. The worm ascends the stalk of wheat soon after it has put out in head, cuts off the head and feeds upon the top of the standing part.

If the evil increases as rapidly in future as it did last year compared with the year before, there will be but a small chance for any wheat in this section of country. I do not know of any person having seen any other crop injured by the worm, neither did any one observe them before the heads of wheat had fallen, nor know what they had previously fed upon. Some think they are what have been called the army worm, but I have been unable to find any description of that species in either the late numbers of the *Cultivator* or *Farmer's Cabinet*. If you are acquainted with such a mischief-maker as I have somewhat described, will you please favor us with any information or any remedy, if there is one.

In some fields, one-fifth of the heads of wheat were eaten off; and the Mediterranean was more injured than

other kinds. The ravages as far as I have heard, are confined to a few miles of this place. P. C.

Penn's Manor, Bucks Co. Pa., April 5, 1844.

NOTE.—The worm described above, is new to us. As to its being the "Army worm," we would observe that the common names of insects are so various that nothing definite can be learned from them. We are unable to find a description of the Army worm in any entomological works; but have heard that name applied only to a species of the *Agrotididae*, or cut-worm family, between which and the insect described by "F. C." there would seem to be but little similarity.

CONDENSED PARAGRAPHS.

MR. EDITOR—Under this head, I send a few articles for your paper.

PREVENTION OF THE BEE-MOTH.—Col. Nathan Beckwith, an old and experienced agriculturist of this town, informs me that the bee-moth may be effectually destroyed by placing, during their active season, near the hives, a few basins of honey and water (made weak,) after night-fall, and removing early in the morning. They are attracted to it and drowned.

CISTERNS.—Those who design putting down a new cistern, (and no house should be without one,) will find it much to their advantage to use water cement. Take a dry time in the summer, and dig a hole with sloping sides, sufficiently large and deep to contain the desired quantity of water, below the frost. Then mix the cement with equal parts of washed sand and spread it upon the ground two inches thick—carefully exclude the water for ten days, when it may be covered in the usual way, and is ready for the rains. Remember about the frost, and it will last forever.

PROTECTION OF COWS AGAINST FLIES.—As the "fly season" is approaching, I am reminded of a discovery I have made, (which should have been made public before,) to prevent the annoyance of cows by flies while milking. It is simply, blanketing. A blanket should be provided for each milker, of such ample dimensions that it will cover the whole animal, falling down as low as the knees, with the right corner scooped out for the milker. Make a loop for the horns. It may be made of any material, but coarse cottons being the cheapest and lightest, recommend themselves. Animals unused to blanketing, will of course at first demur, but by gentleness or slight coercion, they soon become as gentle to the spreading of the blanket, as they are to the approach of the milker. Try it—"it works like a charm."

Tivoli, N. Y., 1845.

G. COOKE.

TRIMMING GRAPE VINES.

CORRECTION.—MR. SIDNEY WELLER, of Halifax, North Carolina, informs us that we made a mistake in condensing his article on grape vines, in our March number. The produce of his vineyard is there stated at "eight to ten barrels of wine yearly." Mr. Weller says it should have been that the *annual increase* is eight to ten barrels, &c., the whole product of the vintage being from twenty-five to thirty barrels of wine. He would have made more last season, but for a long drouth, and a high wind which occurred at a critical time and injured the crop. He thinks the vine "will stand a severe spell of dry weather, as well if not better than any other sort of farm product; but the effect of a very long continuance of dry weather, causes some of the grapes to dry up and others to fall off the vines prematurely ripe." Mr. Weller is a pioneer in the grape culture in North Carolina, and we think his practice well worthy the attention of others, and would therefore invite the perusal of the following brief sketch of the course pursued with his vinery. He says—"first, it is very important to have the right kinds of vines, or such as not only bear well, but are not subject to tantalize the cultivator by rotting. The Scuppernong, Norton's Virginia seedling, my Halifax seedling, &c., are of those kinds, and are all large fruit, and excellent for the table or wine.

"I plant the rooted vine as a fruit tree; say 10 feet apart each way; or if Scuppernong, 20 or 30, and put a

high stake to the north side. I trim 2 or 3 years, to prevent the vines from becoming bushy, and give all the strength to one or two main stems. Then take out the stake and insert a post 8 or 10 feet high, square at top, with two cleats on each side to secure a rail or piece of timber to lay from post to post, to help support the scantling, and form the scaffolding. After this, I suffer the vines to take their own course pretty much in ramifying over the support above; and scarce ever trim any more; and if I do, I simply cut off a branch and let it remain to decay and fall away of itself. Any part decaying or giving way is easily replaced by propping up, and another inserted. Instead of digging holes, I make them by what I call a jabber, or a large pointed piece of hard wood, with a peg inserted across towards the top, by which with a crow bar or stake, the jabber is drawn out of the ground after being pounded in, at a wet time, by a maul or beetle. In this way, it is much less trouble to keep up a vineyard and manage it, than might be supposed. And as to trimming, or saving all or most of the perpetual European labor, in that matter, I believe it the true "American plan," and I see others of your correspondents stating also to this amount. In short, I believe to entirely succeed in grape culture and wine making; the kind of grapes, manner of managing vineyards, and process of wine making must be our own, or *American* throughout, or the *European* will not do in our country."

PROFITS OF POULTRY—KEEPING EGGS.

MR. EDITOR—I ask your attention, while I give you a statement of my attempt to profit, in rearing of poultry. I am a mechanic, hire a house and lot; and I wish to submit for the benefit of others in similar circumstances, the results of attempting to profit by poultry. I saw in the Central New-York Farmer, a statement of Master Geo. Bement, upon the subject in question, and that has induced me to ask a place in your invaluable paper for this article.

The result is for one year, ending the 1st of Dec. 1844, as follows:

Dr.	Poultry Establishment.	Cr.
35 Hens,.....	\$4.38	88 Hens,..... \$11.00
1 Top Knot cock and hen,...	1.00	1 Top Knot cock & hen, 1.00
Grain for feeding,.....	18.67	3,115 Eggs, 32.45
Rent of yard and barn,....	15.00	
Cost,.....	\$39.05	\$14.45
		39.05
		\$5.40

Thus you will see that I have a clear gain of \$5.40, after paying the enormous rent for the use of the barn and yard. My own labors I count as nothing, because they were given before and after each day's labor.

The yard in which the poultry were kept, is a triangular area, surrounded by a high picket fence; through the center of this yard, a stream of water passess, affording the poultry all the drink they needed; and in the center of the yard, there is a bed of coal-dust; and what is not a little novel, each hen had her particular place in which she rolled.

I will however, state that the stock hens had increased from 35 to 88, and that the increase is 53. I hope this effort will spur on others who think they will try to do something to live, to make their way through the world in the best manner possible for the convenience of themselves and families. Much can be done to render less the sufferings incident to man; and we are hereby admonished of the truth of the adage

He that by the plow would thrive,
Must either hold himself, or drive.

PRESERVING EGGS.—My manner of keeping eggs so that they will be fresh, is as follows: I place a layer of saw-dust in a keg, then pack the eggs closely to each other with the *small end down*, to prevent the yolk passing through the white of the egg, over this, place another layer of saw-dust, packing closely to and between the eggs, where they do not touch each other, and so on to filling the keg; then head it tight, and change it end for end every 24 hours. In this manner, eggs will keep a year, and be as fresh as the day they were laid.

Westmoreland, Feb. 10, 1845.

PHILIP SMITH, Jr

SOILS WHOSE CHEMICAL COMPOSITION GIVES THEM PERPETUAL FERTILITY.

MR. EDITOR—There are some very choice pieces of land which I will call lake *intervalles*, dispersed here and there along the shores of the middle and northern portions of the Cayuga and Seneca Lakes. A. Durkee, has a farm half a mile south of the village of Union Springs, on the eastern shore of the lake, seven miles south of Cayuga Bridge, which embraces a strip of this all enduring soil, of many acres, next to the lake shore: its sub-soil is a calcareous soft gravelly shale, the surface a dark friable loam. This *intervale* has been under cultivation more than forty years; for the last thirty years it has borne alternate crops of corn, oats, wheat, and latterly wheat and clover, without any other manure than plaster; all the animal manures of the farm being distributed on the higher land. As there has never been any perceptible diminution of crop, Mr. Durkee takes no pains to increase his organic manures; as soon as his wheat is threshed, the straw is committed to the flames; little pains is taken to save even the ashes of the straw; yet so far from being a careless improvident farmer, Mr. D. is one of the neatest, most thriving, industrious farmers, in a county proverbial for good farming. The land bounded by those lakes, is invariably first rate, unless it is in some places towards their southern extremities, where it rises with too great precipitancy to be strictly arable; but it is only here and there, on a low narrow *intervale* of aluminous schist, underlaid by soft shales, and the limestone ledge, that a *semper* fertile soil is found. A small portion of the soil bordering those lakes, is a heavy sandy loam, originally covered with beech, maple, bass wood, &c.; another portion is a stiff clay loam, intermixed with pebbles, covered originally with oak and hickory trees; in other places, particularly near the Cayuga lake shore, in Fayetteville and Springport, the soil is a greasy oak bearing clay, rich in lime, marl, &c. without stone or gravel. More money has been made by John Dysinger in raising wheat and clover seed on this soil, within the last thirty years, than would obtain belief, should I name the amount. Yet for all the purposes of summer cropping, this soil is next to impracticable, requiring the aid of long manure, and fall or winter plowing, the frost alone can render it permeable, and the long manure ameliorates its subsequent adhesiveness.

I consider that the experiment on the soil of Mr. Durkee, goes far to disprove the Berzilian theory, that humus in the soil is the main source of vegetable nutrition; and to establish the theory of Liebig, that plants derive their sustenance mainly from the atmosphere, positively requiring little more from the soil than their inorganic bases. We are told by David Thomas, that on a dry prairie near Vincennes, Ind., Indian corn had been annually grown more than sixty years, without any sensible diminution of crop, although no kind of manure, animal or mineral, had ever been applied to the soil. Such a soil must be rich indeed in available salts, and the metallic bases. The analysis of various soils by Prof. Sprengel, clearly establishes the fact, that the most enduring soil contains the smallest portion of soluble humus, while the barren heath contains the largest portion of vegetable humus, both soluble and insoluble. S. W.

FARM ACCOUNTS.—We make the following extract from the excellent Address of J. W. PROCTOR, Esq.—“In the agricultural, as in the trading community, property will not adhere that is not cemented by labor. The young man, therefore, who sets out to be a farmer, must look about him and see how farming can be supported, what kind of crops there are that will pay for themselves and yield something. He must so manage as to make both ends meet. I cannot too strongly urge upon him the necessity of keeping accurate minutes of what he does, and of making exact estimates of the result of his labors and experiments. Nothing is more detrimental to good husbandry than uncertain conjectures. Though the result of our operations may not correspond with our wishes or expectations, we should not close our eyes upon the facts. Truth, exact truth, will ever support itself, and him who cherishes it.”

CONDENSED CORRESPONDENCE.

MIXED HUSBANDRY IN MISSISSIPPI.—We give the following extract from a private letter from a subscriber in Amite Co.—“I reside in what is here called the *Pine Woods*, and follow a mixed husbandry, being content to raise four bales cotton to the hand. My farm has, however, afforded me a better profit the past year, than many farms where 8 to 10 bales to the hand, have been raised. I find a ready market for all the pork, beef and grain that I have to spare, and find no difficulty in disposing of all my surplus stock to my more wealthy neighbors west of me.”

LOCUST BORER DESTROYED—SPIRITS OF TURPENTINE.—MR. Z. P. MASON, of Jordan, says—“My locust trees last spring, for the first time, were attacked by the borer—on examination, I found from 20 to 50 in a tree. With a knife I cut off the bark directly over the place they were at work in the wood and applied spirits of turpentine to the place, inserting it when necessary, into the holes with a feather. This was effectual, as no more borers made their appearance during the summer. The trees did remarkably well after the application of the turpentine, the incisions entirely closing up during the summer. Now it is barely possible that I found *all* that were on the trees—if so—*all* were killed—but it is reasonable to suppose some escaped the *direct* application—did not the turpentine circulating with the sap drive and keep them away?”

EARLY BLOSSOMS.—MR. N. PARKER of Trimble county, Ky., writes that he had Peach and soft shelled Almond trees in bloom on the 22d Feb. last.

LARGE EGGS.—A correspondent at Providence, R. I. informs us that Mr. D. CHASE has a Poland hen, that in one week laid three eggs weighing $3\frac{1}{2}$ ounces each, beside one or two others about the common size.”

MARKING FRUIT TREES.—In a late letter to us, Col. RANDALL of Cortland, says—“I can tell you a cheaper and handier way of marking apple trees than the one published in your last; which you can publish in your correspondence, if you see fit. On a leaf of his farm-book, let the farmer put down a *map* of his orchard thus, every dot standing for an apple tree.

R. I. Greening. Strast. Spitzenburg. Gilliflower.

Golden Pippin Tallman Sweeting. Fall Pippin.

The upper part of every map is north. Then by counting rows and the number of the tree in the row, the tree represented by each dot can be readily identified, and the name of the fruit should be put down under each as above.”

POTATOE ROT.—We have received from “G. S.,” a respected correspondent at Pendleton, S. C., a well written article on this subject, which nothing but the great press of communications, prevents us from publishing entire. The conclusion to which “G. S.” has arrived, after much consideration of the subject, is, that “a superabundance of water, or sap in the potatoe, is the immediate or proximate cause of its premature decay.” In reference to a remedy, he says—“it is *depletion*, which in many instances must follow *repletion*, to save life. In other words, I would suggest (whenever it is discovered that the rot has commenced,) the propriety of cutting off the tops just above the surface of the bed, and in one or two days afterwards, to dig the potatoes. It will be found on the day following the cutting, that much water has been discharged from the standing stumps, and that the potatoes have been effectually drained of their engorged sap. This operation, I feel well assured, will very much improve the quality of the potatoe for immediate table use, and I do believe ensure its preservation.” We have heard before, the suggestion in reference to cutting off the tops. We are not certain that doing this *after the blight had struck the tops*, would injure the tubers—we rather think it would not, and hence we see no objection to trying the remedy of “G. S.” But it may

not be amiss to remark that we believe cutting the tops from *healthy* potatoes while the tubers are growing, is injurious. This has been proved by our own experience. It will be noticed that "G. S." advises digging the potatoes in a day or two after cutting off the tops. He may not perhaps be aware of the fact that the blight in many cases has attacked crops before the tubers were half grown. As to the propriety of digging, under such circumstances, we are undecided. In some cases, we have heard of the potatoes being dug as soon as the tops had become blackened by the disease; in others, they have been left in the ground till late in the season; but the results of either practice have not been so uniform as to justify us in saying which should be recommended.

ROT IN POTATOES.—J. STILLMAN, of Schenectady, in a letter on this subject, informs us that he has been familiar with the phenomenon of honey dew, for more than fifty years, and feels confident that it has no connexion with disease in the potatoe. Since reading the remarks of Dr. Jackson in the Nov. number of our last vol. Mr. S. says he has made many inquiries of observing farmers, but has found only one that had noticed the honey dew; and though this man has frequently seen it on the leaves of trees and vegetables, he has never witnessed any of the blighting effects ascribed to it by Dr. Jackson and Mr. Boyd. Mr. Stillman thinks that after all the discussion on the potatoe disease, "we are probably as far from the truth as when we first started." He has no faith in obviating the disease by raising new varieties from the ball, because it is not the *oldest* kinds that are most affected—for example, the "old fashioned reds," he says, are the least affected of any kind he has known. But whatever may be the cause of the disease, Mr. S. advises *early planting* as much safest—this he has proved by several experiments, and it will be seen agrees with our recommendations in the April number.

ROT IN THE POTATOE.—Mr. D. K. YOUNGS of Oyster Bay, (L. I.) says—"The earliest planted on dry ground were not much injured—the late ones, and those on low ground, were worthless, and this without regard to the quality or kind of seed." Mr. Y. will have seen our opinion on this subject, which he asks for, in the April number.

A CHALLENGE.—"Will the editor of the Cultivator have the goodness to state for the information of the cattle growing community, that the Empire State is challenged to produce a better pair of five years old cattle than is now owned by Daniel C. Mason of New Hartford, Oneida Co., to be shown at the next State Fair."

CURE OF SCOURS IN SHEEP.—Mr. N. B. PINNY, of Plymouth, Windsor Co. Vt., informs us that he and his neighbors have tested the efficacy of Mr. Jewett's mode of treating sheep for scours—(see another part of this number.) In connection with this, he relates an incident. Some years ago, his neighbor subscribed for the Cultivator, but took it only one year, thinking that as it was published "out of his own State," it could hardly contain a dollar's worth of information adapted to his wants. In the course of the past winter, his neighbor called one day to inquire for a remedy for the "scours," by which he had lost several sheep and was in a fair way to lose more. Mr. Pinney lent him a number of the Cultivator containing directions in the case. He pursued the course recommended, saved his sheep—became satisfied of his misjudged economy in not taking the Cultivator, and has accordingly again subscribed for it.

SHEDDING OF WOOL BY SHEEP.—Mr. E. B. BROWN, of Mystic, Conn., informs us that his sheep were found, during the past winter, to shed their wool, which he attributed to their having eaten freely of some species of Juniper on which they had been allowed to browse. On keeping the sheep from the Juniper, the wool ceased to fall off.

THE SEASON IN ALABAMA.—A. McDONALD, Esq. of Eufalla, Ala., writes under date of 28th March, that the winter had been favorable to the preparation of the ground for the reception of seed, in that section, and that the spring had also been warm and pleasant till within ten days of the time of writing, when the weather had turned suddenly cold, and several frosts occurred that cut

down the corn. The planting of corn on Mr. McD.'s farm, was commenced on the 26th Feb., and finished on the 12th March. He says the corn that was bitten down, will not be materially injured, as it is only the blade that is affected. Mr. McD.'s oat crop was sown the last of November, stood the winter well, and will be fit to cut the early part of May. Cotton planting was commenced in April.

Mr. McDonald wishes some correspondent of the Cultivator would give the proper management of the sugar cane—the time of planting, quantity of cane per acre, mode of cultivation, grinding, and the preparation of the syrup, &c. Also directions for cultivating coffee, the olive and madder—where seed can be obtained, &c.

GRAFTING ON PEACH STOCKS.—Extract of a letter from a gentleman at Holly Springs, Miss., dated Feb. 27, 1845. "There is a gentleman in this vicinity who cultivates and raises fruit trees for market; he engrafts all his varieties of plums, almonds, apricots and peaches, into the peach, with complete success, in getting them to live; his plan is to graft every thing—has never followed the system of budding. All the communications that I have seen on the subject of grafting into the peach, represent a failure on the part of those who have made the trial. The success of this gentleman does not arise from any thing new in the execution of the work; he does that in the usual way; inserts the cutting at the surface of the earth, and draws up some loose earth around it. My opinion is, that his success depends on the time of grafting, which is at the time of the first moving of the sap, before the tree has commenced to put forth its leaves. This work has been done by him some days since. The peach, and some kinds of plum, apricot and almond trees, are now in full bloom; oats have been planted, and in some instances, corn, in our county. Winter has been mild and pleasant; no cold weather, and but little rain."

MR. GEDDES' EXPERIMENTS WITH CORN.—"A SUBSCRIBER," at Northampton, Mass., says he "would suggest to Mr. Geddes to cultivate the ground upon which he experimented with corn last season, for a series of years without manuring, or until that which was manured, would produce no more than that which was not manured, as he will thereby not only test the relative value but the *real* value of manure. I have never seen an experiment where the real value of manure has been ascertained."

WARM BATH FOR LAMBS.—At one of the agricultural meetings held here last winter, several gentlemen spoke of the advantage of the warm bath for resuscitating young lambs that had become chilled. Mr. S. W. Jewett also recommended the practice in our February number. A correspondent at Northampton, informs that he has practiced it for several years. He says, his "manner is to immerse the lamb in warm water for a few minutes, then roll it in a wollen cloth and put in a warm place till it becomes dry and shows signs of hunger. It will generally get along without any further nursing. Should the extremities be frozen, which is sometimes the case, the frost must be taken out with *cold* water. I prefer absorbing the water with flannel by rubbing it off, as it is somewhat upon the principle of *steaming*." He states that the mode has been successful with him, and he can therefore recommend it to others.

POUDRETTE.—H. B. GLOVER, Esq. of Newtown, Ct., informs us that he has tried Poudrette two years in succession on corn, a gill to a hill, put in the hill on top of the corn at planting time, and has found at gathering the corn, in the fall, no difference either in quantity or quality, from that which was along side of it, and treated equally the same except the poudrette. It is true, he says, "there was a slight difference in the color of the leaves, when it first came up, and the poudrette rows started a little the most vigorously at first, but the other rows in one month had overtaken them, and no difference could be perceived. I am satisfied that it is not a profitable manure, (at present prices,) for me or farmers in this vicinity to buy, when stable, gypsum, ashes, lime and other manures, can be bought as at present."

Finish planting gardens and fields



ALBANY, MAY, 1845.

TO CORRESPONDENTS.

COMMUNICATIONS have been received during the past month, from S. B. Buckley, A Subscriber, G. Cooke, S. Weller, E. B. Brown, N. Darling, Mrs. N. Darling, Z. P. Mason, J. Stilman, H. B. Glover, L. Feutchtwanger, D. Griffin, N. P. Atkinson, J. L., J. P., Richmond, Wm. Makinster, Alex. McDonald, E. M. Chapman, D. G. Mitchell, J. A. Jones, L. F. A., F. C., G. S., D. F. Barker, Publius, A. Delawarian, Thomas Collins, J. P. Norton, Jno. Girdwood, (of Featherhall, Midlothian, Scotland,) M. W. H., A. L. Bingham.

We are under obligations to Mr. WM. BURLING, for a copy of his Address before the Ontario Agricultural Society—To A. G. SUMMER, Esq., Editor of "The South Carolinian," Columbia, for Tuomey's Report on the Geological and Ag. Survey of S. Carolina—To WM. MACKENSTER, for the reports of the Viewing Committees of the Middlesex (Ct.) Ag. Society, for 1844, together with the Address of E. A. Elliot, Esq.—To WM. BACON, Esq., Richmond, Mass., for the 8th Annual Report of the Board of Education of Massachusetts—To GREELEY & M'ELRATH, the publishers, New-York, for "Popular Lectures on Astronomy, by M. Arago, with extensive additions and corrections, by Dr. Lardner—To ELWANGER and BARRY, of the Mount Hope Nursery, Rochester, for grafts of the Northern Spy—To Hon. N. DARLING, New-Haven, Ct., for some ears of the early sweet corn, described in our paper of Jan. last—To J. P. FAIRBANKS, Esq., St. Johnsbury, Vt., for nos. of the Caledonian newspaper—To Col. A. M'DONALD, Eufalla, Ala., for nos. of the Southern Shield, containing proceedings of Barbour county Ag. Society—To Hon. J. A. DIX, U. S. Senate, for "Report to the Navy Department, on American Coals, by W. R. Johnson," a valuable volume of 600 pages, and for Mr. Ellsworth's last Report—To C. H. BRYAN, Esq., for the prize List of the Livingston Ag. Society, for 1845—To ——— for Proceedings of the Virginia State Ag. Convention, at which a State Ag. Society was organized under circumstances promising much for its usefulness—To A. RANDALL, Ed. Plow Boy, Cincinnati, for the Proceedings of the Hamilton County Ag. Society—To Mr. A. L. BINGHAM, Cornwall, Vt., for beautiful samples of wool from his flock of Merinos—To GREELEY & M'ELRATH, publishers, for Part I. of "Popular Lectures on Science and Art," by Dr. Lardner.

J. P. N., (Edinburgh)—We are greatly indebted to Mr. NORTON, for the "series of practical papers, he has procured for the Cultivator, from one of the best farmers of the Lothians, a body of men confessedly surpassed by none in any part of the world." Mr. GIRDWOOD's first communication will appear in our next number, and we need not say that we heartily second our friend NORTON's request for a continuance of his favors.

S. W. J.—The drawings of "Black Hawk," and the Leicester Sheep, are in Mr. Pease's hands. The drawing of Mr. Bingham's Ram, will be engraved as soon as the others are finished.

N. P. of Bedford—Your paper was sent March 19, as soon as ordered.

✂—A large portion of our March number were, through the oversight of the printer, printed with several of the pages transposed, very much to the annoyance as well as to the injury of the volume.

Z. P. M.—The specimens of Marl have not been received.

A. C. S.—We cannot make room for the subject to which your article is devoted, with the present press of matters of more immediate and practical interest, upon our pages. It shall be given at some future time, if we

can make room for it. The same remarks will apply to the communications of "J. A. Jones."

CLEARING LAND.—We should feel obliged if some one who is acquainted with the subject, would give us an article on the best mode of clearing land from the forest. Information is particularly desired in relation to the expediency of burning a large portion of the growth on the land. On what kind of soil is that practice most beneficial? And is it injurious on soils of any description? Does burning out the organic or vegetable matters, sometimes leave soils, after the action of the alkalis has subsided, too heavy and inert? If so, what course of clearing should be adopted instead?

MONTHLY NOTICES.

MR. COLMAN'S EUROPEAN AGRICULTURE.—Part III of this work is now in press at Boston, and will be issued early in the present month. In this number, Mr. COLMAN treats largely on the subject of Agricultural Education, embracing notices of the Schools at Glasgow, Templemoyle, Brookfield, Larne and Ealing, and concludes this subject with a "Plan for an Agricultural Institution for the United States." Among the other contents of this part, are articles on the Elevation of Agriculture as a pursuit and profession—Rural Manners in England—A Pencil Sketch—Life in the Country—Veterinary College—Museum of Economic Geology—Guano, &c. &c.

DR. LEE'S REPORT.—We give in this paper, the Report recently made by Dr. Lee, chairman of the Committee on Agriculture in the House of Assembly of this State, and invite for it the serious consideration of our readers. Its facts and suggestions are of great importance, and are well calculated to induce reflection by those who obtain their living by manual labor. The weight which presses with so much force, and binds so large a portion of our rural population to continual and unmitigated toil, is set forth in a strong and effective light. The necessity of teaching our young men how to produce a good living, and how to keep and enjoy the proceeds of their labor, rather than how to acquire the earnings of others by speculation or other means, is forcibly illustrated; and the remarks on the advantages to be derived from the improvement of the minds of the laborers, commend themselves to the good sense of every one.

We have seen with regret that this document has been denounced in one or two instances, as of "agrarian tendency," for we are sure that nothing could have been farther from the intention of the writer, and also that he has used no language which can properly be so construed. Dr. Lee's object was to show the difference between the value of the labor of the ignorant and the intelligent, and to impress upon the Legislature their obligations to dispense their bounty, so far as in their power, so that it may, like the bounties of Him who has provided for seed time and harvest, reach every one who will avail himself of its benefits. To make the contrast more impressive, he cites the difference in the rewards which are bestowed on the cultivated and uncultivated mind. Whatever opinions may be entertained as to the expediency of putting forth prominently some of the positions of the Report, we imagine there are few persons who will undertake to show that these positions are untrue. It is much easier to denounce an article, than to show by fair reasoning that it is false or unsound.


MELONS AND SQUASHES.—We are indebted to GEORGE H. PATRICK, Esq., P. M., Locust Lane, Va., for seeds of a Watermelon, produced by himself, which he thinks the best he has ever seen—also for seeds of the Nutmeg and Cantaleupe Melons, and Cushaw Squash. Of these, Mr. P. says—"The Nutmeg is a small round fruit, from 3 to 5 inches in diameter. The Cantaleupe is a little larger, and in shape more like the common muskmelon. Both should be taken from the vines when they have the appearance of being green, just as the stem begins to crack or separate from the melon, which it will do when the melon has that fine perfume peculiar to itself. They should be put in a cool room for two or three days, when they will be fit for use. One of the Nutmeg Melons will

perfume a large room. The Cushaw or Kentucky Squash matures early, and is much superior to the pumpkin, cooked in the same way, or in much less time, with as little water as possible—or cut open and baked in an oven with the rind on, and served with butter."

GRAFTING.—We have received from Mr. POND, of Bucksport, Maine, a specimen of a mode of grafting practiced by him and others in his neighborhood, with success. It differs in some respects from any other mode we have seen, though it is somewhat similar to *tongue grafting*. Mr. Pond thinks it has advantages over any other mode for stocks not more than an inch in diameter. The chief difference in this and tongue grafting, is that the stock is not split.

SCIONS OF THE "SWEET AND SOUR" APPLE.—We received from Mr. WM. T. HAMILTON, Clifton Park, N. Y., a parcel of scions from a tree which produces this kind of apple. The same gentleman also sent us samples from the same tree, last fall, which were tasted by many, and the strange peculiarity acknowledged by all. Mr. H. states that forty years ago, two scions were brought to that place from Horse-Neck. The theory of the origin of the variety, which is only *traditional*, as we understand, is that which has been often given, of a union of two scions of opposite kinds. "For several years," (says Mr. H.) "the fruit from these scions was almost entirely sweet; then a small spot on one side, of greener color, and sour as a greening, showed itself. The tree is still living and now bears greenings only. It has some years produced 20 bushels, though they are less sour, and more pleasant than the ordinary greenings. The tree from which those I gave you were taken, produces greenings also, and the two varieties are found growing side by side, on the same twig."

IMPROVED HARNESS-BUCKLE.—One of the most valuable improvements which we have met with for some time, is the "*Compound Lever Buckle*," invented by HENRY LAWRENCE, of Chenango county, N. Y. The article is intended chiefly for the use of the trace or tug in harnesses, and is equally applicable to the heaviest or lightest draft. Its peculiar advantages are, that it dispenses with the use of the tongue, thus obviating the necessity of cutting holes in the trace, and giving to it greater strength and durability. Every one has noticed that a trace breaks first where the tongue of the buckle goes through; this is owing to the whole strain of the draft coming on but a small portion of the trace, and to the leather becoming rotten and weakened by the holes letting in wet. With this buckle, the trace can be taken up or altered to any required position, and is instantly fastened with the utmost exactness, to a hair's breadth. It is an article of great simplicity, neatness and durability, and we have no doubt is destined to come into general use. The patentee has left one of these buckles at this office, where it may be seen by those interested in such improvements.

 The beautiful and high bred Durham bull "Marinus," shown at Poughkeepsie, by Mr. Oliver of Sing-Sing, has, we learn, been purchased by Messrs. Bell and Morris of Morrisania, Westchester county, N. Y.

HARVESTING MACHINE.—We have received from ZERAH M. CHAPMAN, of Illinois, a sketch of a harvesting machine invented by him. He must excuse us for not giving a cut of it, as it is impossible to get, from the draft sent, such an idea of its construction as is necessary to make a proper drawing and description.

GUANO.—We make the following extract from a letter received from EDWARD STABLER, Esq. of Sandy Spring, Maryland:—"Why do none of your correspondents communicate on the subject of guano? I have used it to considerable extent on my wheat crop, sown last fall; the present appearance of the crop is most promising indeed. Mine was the Peruvian guano, Orpheus' cargo, imported into Baltimore by S. K. George, Esq. With two hundred pounds to the acre, side by side, of 25 ox-cart loads, (about 30 bushels to the load,) of barn yard manure, there is a difference of 50 per cent in favor of the guanoed wheat. Nearly half of the field has 12 bushels of ground bones to the acre; but the difference in favor of the guano, is about the same as over the manure. If the guano

only proves durable in its fertilizing effects, it is by far the cheapest and most valuable article I have used as a manure. I intend using about a ton on my corn crop this season."

SANFORD'S STRAW CUTTER.—In the Dec. number of our last volume, we gave a cut and description of this machine. We have lately witnessed its operation, and think it a good implement for cutting hay or straw. It cuts in lengths of about three-fourths of an inch, and with ease and rapidity. The price is \$15.

ADVERTISEMENTS.—A variety of information of public interest will be found in our advertising department this month. The breeders of Short Horns will perceive that Mr. ALLEN proposes to delay the publication of his Herd Book, so as to give them an opportunity to insert their calves of this year.—Those having business to transact at Washington City, or wishing to emigrate to the South, are referred to the notice of Messrs. SKINNER & O'REILLY.—Those wishing to purchase Short Horns, to the advertisements of Mr. PRENTICE and Mr. VAIL, and those who wish to enter into the grazing and wool-growing business on a large scale, to the notice "To Sportsmen."

DUTIES OF COMMITTEES FOR AG. SOCIETIES.—Among the regulations of the Franklin county (Vt.) Agricultural Society, we notice the following article, to which we would call the attention of our readers. It strikes us as a very proper regulation: "It shall be the duty of such committees as shall be appointed to inspect agricultural productions—in making their reports on the same, to take into consideration the skill, industry and economy, with which the same was produced, and accurately note and specify the individual merits and demerits of the principal animals and articles inspected by them, and clearly describe the points in which the preferred animal or article surpasses the others."

IMPROVEMENT OF HORSES.—We invite attention to the advertisement of Gen. Salisbury's horse *Diomedes*, in this number. We thought highly of this animal when we saw him at the State Show last fall, and our opinion seems to have corresponded with that of a committee of acknowledged good judgment, which awarded to him the first premium on horses. We have no doubt he is well calculated to produce a stock of the highest value for the purposes mentioned by Gen. Salisbury. It will be seen that accommodations are offered to mares sent from a distance.

ANSWERS TO INQUIRIES.

T. P. E.—You can obtain the first series of "The Cultivator," 10 vols., handsomely bound—also the first vol. of the new series, of WM. KEAN, bookseller, New-Orleans, who keeps them constantly on hand.

M. V. B.—For drawing and description, from which any carpenter can make a good Roller, see Cultivator for 1843, p. 59.

DORKINGS.—F. C. and P. C.—Do not know of any in the vicinity you speak of. We believe they may be had of Mr. H. T. Chapman or Dr. Field, New-York, at \$3 per pair.

GAPES IN CHICKENS.—T. G., (Springfield, La.)—See last vol. Cultivator, page 305.

OSAGE ORANGE.—"A *Delawarian*"—The most ready way of propagating this shrub, is by *cuttings*, which are advertised for sale by Messrs. Landreth and Fulton, Philadelphia. Price \$10 per 1,000. (See advertisement in March No. of the Cultivator.)

TRANSPLANTING THE SUGAR MAPLE.—The best time is either in the fall, just after the leaves have fallen, or as early in spring as the ground can be worked. See an article in last Cultivator.

FOOT ROT.—N. P. A. (Wheeling, Va.)—If sheep having this disease, are kept in a small space, the ground, particularly if it be wet, is believed to become so infected with the virus, that other sheep may take the contagion by coming into the enclosure. The same sheep might also re-take the disease, unless the remedy used counteracted this influence in the ground till it might be

dissipated by the air. To make sure, however, we should prefer removing the sheep to a perfectly clean lot, after having applied the remedy, and would not let any go on the infected ground for some time.

REFUSE OF FLAX MILLS.—P. B., (Homer, N. Y.)—This substance is not worth your attention as long as you can obtain stable manure at the price you mention—that is, 12½ to 25 cts. per load. The flax refuse rots slowly—on this account we have seen it put round fruit trees to keep the grass from growing, and for this purpose is useful.

FISTULA. (not "thistelo.")—D. G. (Quaker Springs, N. Y.)—If the sore is so far advanced that matter is discharged, Mr. Youatt directs, (Treatise on the Horse, p. 153, 163.) to insert a seton so that the whole of the matter may run out, and continue to run out as fast as it is formed. He says, "the needle should enter at the top of the tumor, penetrate through its bottom and be brought out below the abscess." Some recommend cleansing the sore after the insertion of the seton, with vitriolic solutions, but frequent fomentations with warm soap-suds, will probably answer, and as Mr. Youatt says, in the earlier stages of the abscess, will effect a cure.

WHALE OIL.—E. B. B., (Mysic, Ct.)—There is no doubt that the oil and "filth" from whale ships would make good manure, if properly managed. A gentleman in this neighborhood, has used the blubber of seals to good advantage as manure. His mode of using it, which would probably do well also for whale oil, is to mix it largely with loam or street manure, and let it lie till a pretty thorough decomposition has taken place in the mass. It is recorded that the late Lord Somerville used whale oil at his farm in Surrey. It was mixed with sandy earth, and afterwards applied to crops, and is said to have produced great results. All animal oils are very powerful in their effect on vegetation, and it hence becomes necessary that they should be so incorporated with other substances that they reach the plant in very small quantities only.

SAW-DUST—SWAMP-MUCK—OLD COAL-PIT BOTTOMS—LEACHED ASHES, &c.—J. A. B. (B. M. House, Md.)—Saw-dust is useful in breaking up the tenacity of clay soils. It may be spread and plowed in. When it has thoroughly decomposed, it appears to afford some food to plants. That made from hard wood, is thought best—though oak saw-dust sometimes contains considerable acid, and ashes, or lime, are recommended to be mixed with it on this account before it is used as manure. It makes good bedding for horses and cattle—absorbs the urine, and keeps the animals clean. Swamp-muck varies much in quality, but is generally more or less valuable for uplands. You had better try it. Put some on your wheat and rye lands next fall, and harrow in. Expose some of it to frosts next winter, and in spring put it on your corn land. Note the result in all cases—it may be its effects will be better the second year—it often is so. You may find out in this way, whether it is best for you to use it to any extent. The bottoms of coal-pits are useful to mix with stable manures, and to absorb urine—it prevents, to a considerable extent, the escape of ammonia, and it is a good top-dressing for moist grass lands. The effects of leached ashes, lime, plaster, and bones, on your soil, can best be determined by experiment. They may be tried on a small scale, so as not to run much risk, but with such care that the result may be taken as a guide.

CARROTS.—H. B. G., (Newtown, Ct.)—The seed may be sown with a machine. We noticed one in our last, page 106, (Seward's) which we have no doubt may do well. There were formerly machines sold at the ware-houses in Boston at five dollars each, with which carrots, turneps, &c., could be sown better than they generally are by hand. From an acre, to two acres per day, according to the space between the rows, may be sown by one man with a good machine. Before sowing, the seed should be well dried and rubbed between the hands, or in some other way, to take off the burrs and make it so smooth that it will not clog the machine. A light soil is considered preferable. About sixteen inches is considered the proper distance between the

rows, and they are commonly thinned to two inches in the row. If the ground is quite moist, the seed is sometimes sown on ridges, made by turning two furrows together by the plow. Two rows at the distance of three inches or so, are sometimes sown on a ridge, to make up for the greater space which this mode allows between the alternate rows. The practice of sowing two rows together, as described, is sometimes, also, adopted in level cultivation, in order to give opportunity for the use of the harrow or cultivator, in working the crop. We have been informed that the seed is sometimes sown broadcast, and that very large crops have been obtained by this mode. The argument in favor of it is, that as the carrot makes but a small top, the roots will bear to stand very close, so as almost to cover the ground, and this can be effected more completely by the broadcast, than by the drill mode. From experience we know nothing of the broadcast mode—it appears probable it might have advantages over the others on soils not subject to weeds, but where these prevail the additional labor required to clean the crop, might overbalance the extra yield.

MR. PRENTICE'S SALE OF SHORT HORNS.

WE very cheerfully give place to the following communication, which has been sent us by one of the best judges and most distinguished breeders of cattle in our country, and one who can have no other interest in the sale than that which should actuate every individual who desires to promote the best interests of the farming community. We doubted very much the propriety of the step taken by Mr. P. in offering his whole stock at public sale, without reservation, because such sales heretofore have generally failed to excite that attention which they deserved, and because we feared he would not in this way realize any thing like fair prices for his valuable herd. Mr. Prentice has, however, offered such inducements for an attendance at his sale, as have never before been offered, by pledging himself that his cattle shall be actually sold to the highest bidder, without any bye-bidding or reserve. That they will therefore be sold, and at such prices as the public are pleased to give, is a matter of certainty; and we should hope that this assurance would inspire sufficient confidence to induce such an attendance at the sale as will prevent their being struck off at half their value. A list of the animals to be offered, together with their pedigrees, will be found in the advertising department of this paper.

MR. TUCKER.—I observe in the last Cultivator, that Mr. PRENTICE of your city, has advertised his numerous herd of cattle for sale. The entire frankness and absence of all reservation whatever, with which they are offered, is not only characteristic of the man, but is a sufficient guarantee to the public that a competition will here be offered greater than ever before on this side the Atlantic, to possess some of the choicest specimens of this noble race of cattle.

This step of Mr. P. at this time, has probably been maturely considered, and his reasons for thus offering them, are no doubt a sufficient justification for the boldness of thus inviting a public sale, when the spirit of improving our native herds has so long slumbered, and a renewed energy is hardly yet awakened in our agricultural community. Still, it is to be hoped that public attention will be aroused by this decisive measure, and that our practical farmers, stock breeders, and retired country gentlemen, will avail themselves of an opportunity such as has never yet occurred, in the number and quality of animals offered, to renovate and improve the neat stock of their estates.

After an experience of near thirty years that the Short Horns have been bred in the United States, it has been too well settled by an intelligent public opinion, that they are, individually in themselves, and as improved by the infusion of their blood with our native stock, an invaluable acquisition to our country, to be now denied. It would therefore be the height of mortification that one who has made unwearied efforts, both in time and in expense, and with motives far above all pecuniary con- sider-

rations, should be left unremunerated, in part, at least, for his invaluable services.

It now remains to be seen whether a discriminating public will recognize such efforts, by attending this sale, and purchasing the animals offered at any thing like fair prices, or by a culpable listlessness and want of true self interest, permit, in their sacrifice, a public disgrace. Were this herd of cattle in England, they would undoubtedly bring twice the sum at public sale, that their proprietor would ask for them at private contract, if he were now at liberty to do so; and to such gentlemen as propose to send to England direct for fine animals, at enormous prices, as is almost every year the case, and then obtain those of no better quality, and perhaps inferior to those now offered, this presents an opportunity of which they should wisely avail themselves.

To breeders, this sale is of vital interest. It must, for a time, at least, fix the selling value of American Short Horns. The number and the quality of this herd, and the prices they will bring, are far too prominent to be overlooked or forgotten, by the subsequent purchasers for some time to come; and although the writer of this is a breeder to a moderate extent himself, yet having not the remotest pecuniary interest in this herd, or in the result of the sale, he has a deep feeling that the integrity and high character which this noble breed of cattle possess in the estimation of our most intelligent farmers, shall be sustained by prices that will continue to render them an object of attention for all future time.

Let there then be a rally at this sale, and a substantial disposition evinced to sustain one who has made such important acquisitions to the true welfare of our agriculture as has Mr. Prentice, in the importation and rearing of his beautiful herd of cattle.

PUBLIUS.

WHITE-WASHING.

This is the the season of the year for white-washing. There is no doubt that a coating of lime-wash, or some other application, tends greatly to preserve buildings, fences, &c., that are exposed to the weather. The inside of our dwellings, also, is greatly improved in appearance, as well as rendered more conducive to health, by washes of lime. We have in former volumes given various receipts for making white-wash; and would refer our readers to the vol. for 1843, p. 88.

In the Report of the Commissioner of Patents for 1844, we find the following directions for making washes, and which are there recommended with much confidence. The superiority of this wash said to depend upon white vitriol, sometimes called sulphate of zinc, which is represented as a powerful mordant to harden and fix the paint.

For brick or stone.—One barrel of stone lime, (fresh burnt is best,) slake it, and then add two barrels of hydraulic cement or water-lime, stir them together until about the thickness of paint suitable to be laid with a brush; then add twelve pounds of white vitriol, (sulphate of zinc,) stir same for an hour, or till thoroughly mixed; let it remain twenty-four or thirty hours, and it is fit for use. When you commence using it, take for every four gallons, one quart of fine dry sand, and stir them together; put it on the wall with a large paint-brush; if too thick add a little water. This mixture produces a pale yellow; after which, (when dry,) to produce a pure white, go over the same with white-wash, as follows: one bushel of lime, with one pound of sulphate zinc.

For wood-work.—One bushel lime; one pound white vitriol, (sulphate of zinc;) one quart of salt; one peck of white sand.

Sulphate of zinc can be formed by taking one part sulphuric acid, four parts water, and adding as much zinc as it will take up.

THE STING OF A BEE, it is asserted, owes its poisonous nature to its being an *acid*; and therefore liquor potassia, by neutralizing the acid, becomes one of the best remedies. As it is very caustic, and corrosive to the skin, it must be applied at the precise spot, on the point of a pin or on the tip of a camel's hair pencil.

Notices of New Publications.

FRUITS AND FRUIT TREES.

The Fruits and Fruit Trees of America; or the Culture, Propagation, and Management, in the Garden and Orchard, of Fruit Trees generally; with Descriptions of all the Finest Varieties of Fruit, native or foreign, cultivated in the gardens of this country. Illustrated with numerous Engravings and Outlines of Fruit. By A. J. DOWNING. 1 vol. 12 mo., (and also 8 vo.) New-York, Wiley & Putnam.

It is with feelings of more than ordinary gratification, that we announce the appearance of this invaluable work. We are sure that none of our readers will be in the least disappointed with its contents, notwithstanding the high expectations which have been raised by the known abilities of its author. A deliberate examination of a large portion of the work, enables us to say, without hesitation, that it is by far the greatest acquisition placed within the reach of American cultivators of fruit, which has ever yet appeared.

Nearly sixty pages of the first part of the work are devoted to the general principles and practices of fruit culture. The greater part of this is the direct result of the author's own extensive experience, combined with that of the experience of others; and taken as a whole, it is a perspicuous and admirable digest of all that is known on the subject up to the present time. The remainder of the volume is chiefly devoted to the different kinds of fruit, their management, diseases and enemies, and full and accurate descriptions of the numerous varieties, of a large part of which excellent outline figures of the natural size are given.

The pre-occupied state of our pages, prevents our entering upon an analysis of the work at this time; but we shall next month take up the subject and favor our readers with extracts from several portions of the work. The clear and neat style of the author, his extensive and long continued experience, and the unwearied labor which he has bestowed upon the work, have rendered it nearly all that could be desired in the present state of knowledge on the subject. New and repeated additions to the stock must of course be continually made; and in promoting and facilitating these additions, this work must prove a powerful auxiliary.

There are occasionally incidental remarks made, and opinions advanced, with which we do not fully agree, or which may partake of a conjectural character; but they are very few in number, and can scarcely affect the value of the work even in a trifling degree. The amount of matter afforded in a clear and condensed work as this is, of no less than 500 pages, with about two hundred engravings, illustrating the processes of Grafting, Budding, Training, &c. and outline figures of fruits, at the low price of one dollar and fifty cents, should induce every one who cultivates a single cherry tree or currant bush, to possess it at once, and avail himself of the ample instructions and interesting facts with which it abounds.

Report on the Geological and Agricultural Survey of South Carolina, for 1844, by M. TUOMEY—pp. 64.

We are indebted to Col. A. G. SUMMER, of Columbia, S. C., for a copy of this work. The Report consists of three general divisions, or chapters, viz: Primary Rocks, Metals, and Economical Geology—to which is added an Appendix embracing the "Prize Report of Experiments, submitted to the State Agricultural Society of South Carolina, Nov. 1844," by FRANCIS S. HOLMES.

We find in this Report, some interesting facts, particularly under the third division, or Economical Geology; we cannot, however, do more for the present than briefly advert to them. Speaking of *Gneiss*, the writer states that it occupies, in a considerable degree, the mountainous portion of the State, and that he

"Was not a little surprised to find on the very summit of Glassy mountain, and on one of the highest of the Saluda mountains, crops that would have done no discredit to more favored localities. On the most rugged sides of these mountains, particularly in the moist dells the luxuriance with which the natural grasses grow, show how wa

they are adapted to sheep-walks, and it is strange that so little attention has been directed to this branch of agricultural economy."

The writer again remarks, in reference to a hilly region in the county of Pickens, the soil of which is considerably derived from *Mica slate*, that the hills were covered with verdure, when he saw them, while a few miles lower down, the contrast was striking, every thing being parched by drouth, and that "it was impossible to keep the fancy from picturing these beautiful hills covered with clover, and alive with a thousand flocks and herds—for there is lime in their very midst. Both the climate, and the geological character of this region, mark it as the grazing country of the State."

Under the head of the *uses and action of lime*, the writer observes—

"A knowledge of the action of lime on vegetable matter, ought to prevent the mistakes committed in putting it in contact with the roots of plant, the delicate fibres of which it must attack, if there be not a superabundance of other vegetable matter in the soil. As lime acts chiefly by bringing into action ingredients that were inert in the soil, and as every crop carries off a certain quantity of soda, potash, phosphoric acid, &c., it follows that unless these be added, in the various forms of manures in which they exist, that a soil may be unproductive, though having lime in abundance. I now speak of lime, not marl, for in marling, many other substances are added as with lime."

The Appendix relates chiefly to experiments with marl, on various crops. The action of this substance is shown to be highly beneficial, and from the quantities in certain portions of the State, no doubt is entertained that it furnishes a source of fertility to the soil, the value of which is incalculable.

We give the result of an experiment of the marl on corn. Its effects on cotton and potatoes were similar:

Half an acre, without marl or manure, produced 8½ barrels ears of corn—with eight cart-loads compost in 1843, 10½ do.—with 6½ bushels marl, broad cast, 11½ barrels.

Report of the Hon. H. L. ELLSWORTH, Commissioner of Patents, showing the operations of the Patent Office, during the year 1844.

We are glad to learn that an edition of this valuable Report, which we noticed in our last number, has been published for sale, by our Agent in New-York, M. H. NEWMAN, bookseller, 199 Broadway. It can also be obtained of LITTLE & BROWN, Boston—G. B. ZIEBER & Co., Philadelphia—GEO. JONES of this city, and we presume of booksellers generally. Price 75 cts.

LOWELL OFFERING.—This publication, supported as it is entirely by the intellectual talent of the female laborers in manufactories, is not only highly creditable to the editors and contributors, but is even a subject of just pride to the country. It exhibits in a striking light the elevated condition and character of this class of our population, when compared with descriptions of the same class in Europe. Though it is truly the "Factory Girls' Offering" many of the articles would do no discredit to literary writers of acknowledged merit. Edited by Misses CURTIS and FARLEY—published monthly, at one dollar a year.

THE FARMER'S LIBRARY, and MONTHLY JOURNAL OF AGRICULTURE.—Messrs. GREELEY & McELRATH, New-York, have issued a prospectus for publishing a work under this title, for the editorial management of which they have secured the services of John S. Skinner, Esq., the founder and former editor of that pioneer of Agricultural publications in this country, the *American Farmer*. The plan of the proposed work is as follows: Each number will consist of two distinct parts—I. *The Farmer's Library*, in which will be published continuously, the best standard works on Agriculture, beginning with Stephens' *Book of the Farm*, a recent Scotch publication of high character. This division of the work will embrace 600 pages a year. II. *The Monthly Journal of Agriculture*, which will contain about 50 pages per month, and will comprise, 1. Foreign selections from the higher class of British, French, and German periodicals of Agriculture, with extracts from new books which may not be published in the Library. 2. *American Editorials*, communicated selected accounts of experiments, &c. Each number to be illustrated with numerous engravings. Its price will be five dollars a

year in advance, for two royal octavo volumes of 600 pages each. We have no doubt it will be a very valuable work, and we cordially recommend it to the patronage of the public.

USEFUL WORKS FOR THE PEOPLE.—Messrs. GREELEY & McELRATH, of New-York, having lost by fire their stock of books, plates, and engravings of their series of "Useful Books for the People," have commenced the publication of a new series, the first in order of which is the work on *Astronomy* by M. ARAGO, with additions and corrections by Dr. LARDNER. The works of these philosophers are distinguished for combining accurate scientific information, with much that is pleasing and attractive, and on the subject of Astronomy, in particular, their writings are looked upon with great confidence. We venture to say that no opportunity has before been offered to the American public of procuring so large an amount of valuable scientific information at so small an expense. The number, comprising the lectures on *Astronomy*, contains 96 pages large octavo, small print, with numerous diagrams and illustrations. This publication is to be followed by others of a like useful character—each series being complete in itself—and of a size so uniform that the whole may be bound together. The price of the number on *Astronomy*, is 25 cents, which will also be the price of each of the series of Useful Books.

SPIRIT OF THE TIMES.—A Chronicle of the Turf, Agriculture, Field sports, Literature, and the Stage.—As a sporting chronicle, this publication has long been distinguished and unrivalled. Though we are accustomed to estimate things by an utilitarian scale, we must allow the "Spirit" an eminent character even in this respect. If the old adage of "laugh and be fat," is to be regarded in the light of *cause and effect*, there is no knowing how much *fatness* the witty sayings and funny stories there given may have produced, or from how many hypochondriacs the "blues" may have been banished, and the dyspepsia cured! And what labors can be considered more *useful* than those which promote health, and save doctor's fees? This old favorite commences the fifteenth volume with new type and other improvements, which render its appearance even more attractive than ever, and together with the style and character of its contents, cannot fail to recommend it to all seeking any thing in that line. It is issued weekly, each number containing twelve large quarto pages, at five dollars per annum. Three or four elegant steel engravings of celebrated horses, are given in the course of a volume, without extra charge to subscribers. Published by JOHN RICHARDS, No. 1, Barclay-street, New-York—WM. T. PORTER, editor.

MR. TUCKER.—I am aware you have no "poet's corner" in your strictly *utilitarian* paper, but presuming you are in favor of whatever is designed to elevate the feelings, even though expressed in rhyme, I have ventured to send you the following

HYMN FOR THE SEASON.

Bounteous Father! Lord on high!
Who hear'st the raven's feeble cry,
With thy protecting goodness, rife,
Long-slumb'ring nature wakes to life!
Earth's kings may rear the tow'ring spire,
And feed with gold the altar fire—
Not from the organ's peal alone,
Anthems arise before thy throne.
Those holier temples, large and wide,
The glen, the grove, the mountain-side,
Resound with choral songs of praise
To that blest Pow'r who tunes their lays.
Each bud and flow'ret, leaf and tree,
Breathes orisons, O God! to thee,
Whence emanates unchanging love,
Embracing all, around, above.
Revolving seasons now have brought
Sweet Spring with cheering beauty fraught—
Seed-time again to us is giv'n;
We trust to earth, and hope in Heav'n.
Send thou the late and early rain
To vivify the springing grain—
And when the harvest home we bear,
Let grateful peans fill the air!

M. W. H.

NEW-YORK STATE AGRICULTURAL SOCIETY.

At a meeting of the Executive Committee of the N. Y. S. Agricultural Society, held at their room on the 17th April, the President in the chair, there were present, Messrs. Prentice, M'Intyre, Enos, Vail, L. Tucker, Nott, Cheever, Emmons, Howard, and Sotham.

The President presented a letter from Col. A. G. SUMMER, Esq. of Columbia, S. C., expressing his warm interest in the objects of the Society, and informing the President that he had been directed by the State Ag. Society of South Carolina, to forward to our Society, the Reports of the Geological Survey of that State, together with several documents emanating from that Society.

A letter from L. F. ALLEN, Esq. having been read, in relation to the Premiums on Horses, it was resolved that the following *additional* prizes be offered:

Best "blood" stallion, 4 years old,.....	\$20.
Second best, do. do.	10.
Best "Draught" stallion, do.	20.
Second best, do. do.	10.

Additions were also made to the prizes for Fat Cattle, by adding a class for fat cows and heifers, separate from oxen or steers—First, \$10—Second, \$5—Third, vol. Transactions.

L. A. MORRELL, Esq. of Tompkins county, was present, and presented the copy of his "American Shepherd," in manuscript, most of which was examined by the Committee, and a resolution was unanimously adopted, highly approving of the work, which is soon to be published.

The following letter, with the accompanying package of seeds, was presented by the President:

"New-York, April 17, 1845.

"SIR—The accompanying parcel of seeds was handed to me, in Washington city by Gov. Marcy, with a request that I would transmit it to the State Agricultural Society of New-York.

"It contains a portion of a package of seeds received at the War Department, for distribution, from the Commissioner of the Patent Office.

"May I ask that the proper officer of your society will acknowledge the receipt of the parcel to the Secretary of War at Washington.

"Very respectfully, I have the honor to be your obedient servant.
PROSPER M. WETMORE."

The thanks of the Society were voted to Hon. WM. L. MARCY, Secretary of War, for the package of seeds, which were distributed among the members.

A letter having been received from FRANCIS ROTCH, Esq. now in London, together with dies ordered by the Society for Medals, executed by Mr. Taylor, a distinguished artist of Birmingham, after subjects and designs by Mr. Rotch, the following resolutions were unanimously adopted:

Resolved, That the thanks of the Society be tendered to Mr. Rotch for his attention to the request of the Society; and the Executive Committee take great pleasure in expressing their unqualified approval of the designs prepared by him for the medals, which, in their estimation, are peculiarly appropriate.

Resolved, That Mr. ROTCH be desired to present to Mr. TAYLOR, the thanks of the Society for the superior manner in which the dies have been executed, and which reflect the highest credit upon him as a Medallist.

A circular addressed by the Cor. Secretary to the County Cor. Committees, was read and approved, and ordered printed.

COUNTY AG. SOCIETIES.—We are glad to see that quite a number of the County Societies of this State, have already issued their Prize Lists for the coming autumn shows. We have received the Prize Lists from *Queens*, to be awarded in October—*Rensselaer*, show to be at Troy, Sept. 24, 25—*Orange*, to be held at Goshen, Oct. 8, 9; all the premiums to be paid in silver spoons—*Livingston*, to be held at Geneseo, Oct. 2—*Ontario*, to be held at Canandaigua, Oct. 14, 15; among the premiums are 20 copies of "The Cultivator"—*Clinton*, to be held at Plattsburgh, Sept. 16, 17.

AGRICULTURE OF SOUTH CAROLINA.

MR. ROPER'S ADDRESS.—The author will please receive our thanks for a copy of the address, delivered before the State Agricultural Society of South Carolina, Nov. 28, 1844. It is a well written document; and contains much valuable statistical information. The writer endeavors, in a very earnest and striking manner, to induce the people of his State to adopt some course of operations by which they may relieve themselves from their present burdens. He shows that they (as a State,) now spend more than they make, "and consequently the State languishes under an incubus, which will require a strong moral force, independent of activity and industry, to remove." He says—"we allow the negroes to become an expense of more than two and a half millions of dollars for clothing, corn, bacon and tobacco, and their plantation implements." Mr. Roper shows the necessity of diversifying the objects of industry. The production of cotton in South Carolina, cannot be depended on as a source of profit. In relation to this article, he says, "though it was once our wealth and pride, it can continue so no longer; a fairer bloom opens on other lands, and every day imparts a more ominous warning that the sceptre has departed." He regards it as "pernicious that so pervading a propensity exists to investments in lands and negroes, to grow rice and cotton."

The remedy for this state of things, the adoption of which Mr. Roper urges, is the introduction of a more varied system of agriculture, by which the sums now sent out of the State for beef, pork, bread-stuffs, butter, cheese, &c., shall be saved at home; and also the introduction of *manufactures*, several successful examples of which, existing in that State, he brings forward. Of the influence which manufacturing establishments have exercised, so far as they have been tried in South Carolina, he thus speaks: "The effect of this diversity of labor, has been to extend competence among the neighboring people, to *improve their morals*, intelligence and education, and establish a *more respectable order of society*."

BONES AND FISH FOR MANURE.

We have received from Mr. WM. MAKINSTER, an Address delivered before the Middlesex (Ct.) Ag. Soc., by E. A. ELLIOTT, Esq. In this address, Mr. E. speaks of the effects of *bones* and of *fish* as manure. He states that bone-dust has been applied in his neighborhood with good results, to corn, rye, ruta бага, and other crops. An application of twenty bushels per acre to a portion of a rye-field, produced a difference of nearly one-half in the yield, the field being alike in other respects.

In the neighborhood of Mr. E.'s residence, large quantities of "white fish" are taken, and frequently used as manure. This application of fish was commenced, he says, in that neighborhood, about the year 1790. The effects were great—"barren plains, which had been long unproductive, were converted into the most fruitful fields. Their beneficial effects were manifest upon all soils, and for a number of years; while they were taken in large quantities, they were relied upon for the rye, corn, and particularly the potatoe and turnep crops, to the exclusion of almost all other kinds of manure. It was found, however, that their effect upon a second application, was not as great as upon the first, and still less upon a third, and this led many to doubt their utility as a constant dressing for all kinds of crops, and especially upon sandy soils, without an intervening application of barn yard manure, as they are found to exhaust the vegetable matter of the soil, and leave it in a compact and unproductive state. Their effect has continued to be great upon strong rocky loam and clay or moist lands; upon such lands they produce as large crops as can be found in the fertile regions of our western country. Their effect is visible on sandy soils for two or three years, and longer upon loam and clay. The usual mode of applying them, is to spread them, and after a few days harrow and plow them in with a light furrow. Some persons stack them with yard manure, or earth and turf, and think their effect sufficiently increased to compensate for the extra labor of stacking and carting out."

STEEPING SEEDS.

For the purpose of stimulating the growth of plants, various solutions have been employed for steeping the seeds. The substances thus employed have been nitrate of soda, nitrate of potash, or salt-petre, muriate of ammonia, sulphate of ammonia, &c., &c. Salt-petre has long been used, in some form, as a fertilizer, and nitrate of soda has within a few years been recommended as a substitute, in some respects preferable. So far as we have learned, however, the effect of nitrate of soda appears to be rather to produce *vegetable fibre* or straw, than grain or seed; and hence it has latterly given place to muriate of ammonia in the preparation of solutions. Many experiments which have been made in Europe, show that wheat, barley, oats, peas, and beans, have been considerably increased in yield by the seed having been soaked in solutions of the last named substance. The trials which have been made in this country, have as yet been comparatively few, though some results which were made known by experiments last year, have indicated an important benefit from the application of the article to Indian corn.

One of the best examples which occurs to us of the benefits derived from the muriate of ammonia, is furnished by the experiments of Dr. S. Webber of Charlestown, N. H., reported in the N. E. Farmer. Dr. W. used a solution for soaking corn as follows: He dissolved a small piece of the muriate of ammonia, estimated at four or five grains, in about half a coffee cup of water, and threw into the solution a handful of corn, which, after having remained four or five hours, was planted. He planted this soaked corn in hills, side by side with that which was not soaked. In four different cases which are reported, the soaked seed produced much the largest yield—generally full one third more. The land was light and dry, and for several of the experiments, the poorest spots were purposely taken. The corn suffered from drouth, but in all cases that from the soaked seed manifested a decided superiority, and frequently attracted the attention of strangers who knew nothing of the cause.

Ammoniacal liquor, which is produced by the distillation of coal in the manufacture of gas, is thought to be a valuable manure. Mr. Hannam, in his Essay on Waste Manures, describes this liquid as being "an impure solution of the carbonate of ammonia, and is the very gas which is evolved during the decomposition of animal substances, and which escapes from our manure-heaps during fermentation. "It is," (he continues,) "highly necessary to vegetation—the plant extracting the carbon of its structure from the carbonic acid, and its nitrogen from the ammonia of the carbonate of ammonia. The gas liquor holds in solution acetate, sulphate, or muriate, as well as carbonate of ammonia; in all of which states it is fitted to promote the growth of plants. The general average of its ammonia, in one or other of these forms of combination, according to Professor Johnston, is from twenty to forty pounds per one hundred gallons."

Judge Koon of this city made some trials with the ammoniacal liquid last season. He informs us that its effects were in all cases highly beneficial. Corn and oats soaked in the liquid for thirty hours before planting, showed a broader and greener leaf, produced larger heads and ears, and yielded, he thinks, at least twenty per cent more than that without the liquid—the treatment being in all other respects, similar.

Mr. Campbell, of Scotland, has become distinguished for the preparations of steeps for seed grain, which in some cases appear to produce remarkable effects. The salts he uses are sulphate, nitrate, and muriate of ammonia; nitrates of soda and potash, and combinations of these. Mr. Colman gives, in the second part of his *European Agriculture*, a letter from Mr. Campbell, in reference to the advantage of using these steeps. He mentions the following experiments in illustration of the comparative productiveness of prepared and unprepared seed. Some seed-wheat, soaked in nitrate of ammonia, was sown on the 5th of July, which, by the 10th of August, he says, presented the following results: "The prepared seeds had tillered into nine, ten, and eleven stems;

the unprepared into only two, three, and four; and both were from the same sample of seed, and sown in the same soil, side by side. The time of steeping varied from fifty to ninety-four hours, at a temperature of about 60 degrees Fahrenheit." The yield of grain from these plants, was not known at the time Mr. Colman sent the account for publication, but we may expect to hear further particulars hereafter.

A year ago, a pamphlet was published by a German chemist named Bickes, in which it was declared that seeds may be so treated as to render unnecessary any manuring of the soil in which they are to be sown, and that even from the most barren sands, luxuriant crops may be gathered. Indeed the wonderful virtue of this newly discovered process seemed hardly less, from the representations given, than were formerly attributed to the "philosopher's stone." It can, however, serve but little purpose to occupy space, or spend time in reading the accounts of this supposed discovery, as the author only imparts a knowledge of its nature and constituents to such as *pay for it*. Professor Johnston, in a notice of the pamphlet of M. Bickes, in the *Edinburgh Quarterly Journal of Agriculture*, observes that—"He is one of that class of discoverers who wish to sell their secrets, and by magnifying their importance, hope to derive a larger profit by divulging them. With such men the true friends of agriculture can have no sympathy."

As a steep for Indian corn, we should prefer muriate of ammonia, which we would use in the following manner: An ounce of the article, (costing two cents,) is deemed sufficient for a quart of corn. It should be dissolved in a sufficient quantity of water to fairly cover the seed, which may remain in the solution twenty-four hours, in a temperature of sixty to seventy degrees. In order to demonstrate as clearly as possible the effects of the solution, the trial should be conducted with the strictest care and precision. We can think of no better mode than to plant alternately two rows with seed from the solution, and the same number with seed without any preparation—extending the experiment to ten, twelve, or more rows of each—the soil and the management to be as nearly equal as possible over the whole. Let the product of the rows to which the solution was applied, as well as the other rows, be carefully weighed and compared, and the result will indicate the value of the solution to the crop.

Solutions, and the application of various substances to seeds, for the purpose of preventing the attacks of insects, have been recommended and used. The success of most of the experiments of this kind, seems rather doubtful. So far as relates to insects which feed on the *blade* only, we have never witnessed the least effect from applications of any kind to the seed, though we have seen many substances used. The most formidable enemy to grain crops in the early stages of growth, is the wire-worm, (a species of *Elater*.) This worm bores into the seed, eats out its substance, and frequently destroys the plant by eating off the radicle as soon as it protrudes from the kernel. The attempt has been made to apply some substance to the seed which would render it disagreeable to the worm. It has been soaked in solutions of sulphate of iron, (copperas,) &c., and coated with compositions of tar and arsenic. To us, it seems not unreasonable to suppose that these substances would tend to make the kernel unpalatable food for the worm, though it seems generally admitted that the tar is not favorable to the growth of the plant. The substances used to prevent the attack of worms, are likewise used to prevent the grain from being pulled up by birds and squirrels. Those who have tried them, state that after a few plants have been pulled up, the birds, finding the kernel in an uneatable state, abandon the attempt to find food in that way.

As regards the prevention of the wire-worm, however, other means have been recommended, which in some instances at least, seem to have had the desired effect. It has been noticed that the wire-worm will feed on pieces of corn cobs, and this has led to the practice of dropping pieces of cobs with the corn. The worms burrow into the cobs instead of the corn. We have seen instances where this remedy succeeded to considerable extent, as was ascertained by digging up the pieces of cobs put

in the corn-hill—the cobs being found, with the worms feeding on them. Pieces of potatoes have sometimes been used instead of cobs, and are said to answer quite as good a purpose.

The remedies above mentioned, are sometimes recommended as being also effectual against the ravages of the “white worm,” or “white grub,”—*Melolontha vulgaris*. It may be proper to remark that the habits of this insect and its modes of feeding, are such that none of the means alluded to, would in the least obviate its attacks. It does not eat the seed itself, but generally commences feeding on the roots at some distance from the seed or center, and thus cuts off from the plant its supply of nourishment.

IMPROVEMENT IN SCHOOLS.

Mr. JOSIAH HOLBROOK has recently visited this city, in behalf of the Public Schools of New-York, for the purpose of exhibiting to the members of the Legislature and others interested in the cause of education, some specimens of the results of improvements introduced into those schools, and of explaining the methods of instruction which he has so long advocated. Mr. H. maintains that a system of instruction should be introduced which will attract the attention and interest and call into action the minds of the children, instead of the mechanical course now pursued. Instead of confining the child to the irksome and monotonous employment of learning the ridiculous and unmeaning tables of syllables and words which occupy so large a portion of our “spelling books,” he would at once present to the child an object which should awaken its attention and excite its curiosity, and thus learn it the names and uses of things even before it understands the formation of words, thus learning the use of language before it is compelled to learn by rote its construction. For the accomplishment of this object, he has prepared a variety of school apparatus, which has been introduced in many schools to very great advantage. In learning children to write, instead of the old system of setting them to make marks, he presents them with a definite object to accomplish, by directing them to draw some object—a square for instance. The child’s ambition is at once excited, and those who have not noticed the attraction which such pursuits afford children, will be surprised at the avidity with which they will follow them. As the child’s mind is developed, he presents it with the objects before him, explaining the names and uses of things, and from these, proceeds to the works of God—and sets forth the great principles which govern all the works of creation, which are open to the vision of the child, leaving the minuter divisions and rules to be learned as the child himself feels the necessity for them, when they will be sought for, instead of having to be pressed upon them. Thus the mind is constantly brought into activity—habits of thought and observation are induced, and the child led on by its own desires for farther acquirements, only needs the direction and kindly influence of the parent or teacher, to induce it to go on from step to step in the pursuit of that knowledge which is to prepare him for happiness and usefulness.

Several meetings have been held at the Assembly Chamber, on the subject, at the last of which, a committee, consisting of the Secretary of State, the State deputy superintendent of common schools, the chairman of the Assembly’s education committee, and others, was appointed to take into consideration this great subject, who have prepared a report (published in the Dist. School Journal for this month,) expressing their entire approbation of the views and plans presented for their consideration. Of the efficiency and excellence of this system, which can hardly fail to receive the approbation of those who will give it a careful and unprejudiced examination, we can speak from several years experience in our own family, and can state that while it adds greatly to the improvement, obedience and happiness of children, it very greatly diminishes the expense of their early education; and while it furnishes a source of never-failing happiness to children when young, it fixes in them such a habit and love for improvement and industry as to secure their future progress in improving and useful pursuits.

FOREIGN ITEMS.

Our English papers speak of the weather during the month of March having been uncommonly cold. From the 1st to the 21st, snow fell daily in many parts of the kingdom accompanied by piercingly cold easterly winds. The ground was generally so much frozen as to prevent its being plowed. Great fears had been entertained respecting the condition of the wheat crop, but on the frost breaking up it appeared that but little injury had been done, and our latest accounts say that the prospects of the farmer in regard to crops, are cheering.

The provisions of the British tariff in regard to the admission of foreign live stock, are much complained of, and it is said that the exertions making on the continent for the supply of the English markets, are operating to the decided injury of the English farmer.

It is stated that one nineteenth part of the whole consumption of bread-stuffs in the kingdom was last year imported from Canada, and the exclamation is added—“*what wonderful crops these Canadians must have had, to spare so much for the mother country!*” The low prices of produce are said to have thrown many English laborers out of employment, and in some neighborhoods public meetings had been called to consider measures of relief.

LOSS OF MANURE IN TOWNS.—The Ag. Gazette remarks, “every shower of rain washes much valuable manure down our public sewers and drains, and thence into the rivers and sea; and thus while we employ ships in fetching guano some thousands of miles to enrich this country, we will not pick up that which lies under our feet. The streets are swept indeed, but little more than gravel, sand and litter is saved; the finest and richest parts are taken away by the rain. There would be no difficulty in forming reservoirs into which all this might flow, and from which it might be transferred to enrich the ground.” But the facts, showing the influence of good drainage and cleansing of streets, on the health of towns, are very striking. In the best streets in Preston, the number of deaths above five years of age, were about double those under five; in the moderately drained streets about equal; but in the “ill-conditioned” parts of the town, the deaths under five were two-and-a-half times as numerous as those above. That is, five times as many children die under five in proportion to those older, than in the cleanly streets; the death of older persons with whom they are compared, being also much more numerous in the bad streets, which renders the disparity still more appalling.

DEPTH OF ROOTS.—In light subsoils, the roots of trees have been found at a depth of 10 or 12 feet—roots of the Canada thistle have been traced 6 or 7 feet below the surface. Wheat, in a rich mellow soil, will strike roots 3 feet downwards, and much further horizontally. The roots of oats have been discovered 18 inches from the stem, and the long thread-like roots of grass, still further. The fine roots of the onion, being white, and easily traced in black soil, have in trenched soil been followed two feet deep. The importance of a mellow soil for these fine roots to penetrate, is obvious.

KILLING RATS.—The following poisonous mixture was recommended by Humphrey Davy, as being cheap and tasteless, odorless and impalpable, and hence may be put with any substance which rats devour, without exciting their suspicion. It is merely a mixture of carbonate of barytes, with eight or ten times its weight of grease. It produces great thirst, and death immediately after drinking, thus preventing the animals going back to their holes. To prevent accidents to dogs, cats and poultry, it is spread inside of an iron vessel, hung with wire, bottom upwards, over a beam, just high enough for a rat to pass under easily. The writer says he has proved its efficacy many years.

TURNIP FLY.—A correspondent says, that repeated and varied experiments have proved, that half an ounce of sulphur mixed with a pound of turnep seed, will completely prevent the ravages of the fly. [??]

YELLOWS IN THE PEACH.

WE have received an extended communication from "I. M. B." on this subject, consisting chiefly of suggestions, and not of the results of experiments, and which the crowded state of our columns precludes publishing at length.

Our correspondent calls attention to the difference of culture given to the peach in this country and in England, and speaks of the superior management in the latter country, by selection of soil, situation, and stock; and by pruning, training, and thinning the leaves, flowers, and fruit, and where the *yellows* is unknown.

He next proceeds to show, by the composition of the peach tree and its products, that a large share of nitrogen is required in its growth. "One of the distinguishing products of the seeds and leaves, and doubtless necessary to the existence of the peach, is Prussic or Hydrocyanic acid, a highly nitrogenized substance. The constituents of this acid are as follows:—

Cyanogen, (by weight,)	1.8054
Hydrogen, "	0.0694

Cyanogen is constituted as follows:—

Nitrogen, (by weight,)	29.652
Carbon, "	25.418

"Although nitrogen is an abundant constituent of the atmosphere, it is not in a form well adapted for the food of plants, and yet in a form that can be so used, it is of the utmost importance. The proportion to be sure, is small, but if it fail it must be replaced by artificial means. If we look at the economy of the peach, it will be observed, that probably, double the quantity of nitrogen will be required to sustain it in a healthy and vigorous state, than that of wheat, which we know cannot be successfully raised many years on the same field, without an artificial supply of this kind of food. If wheat can exhaust the natural fertility of the soil in eight or ten years, it is not unreasonable to suppose that the peach will do it in less time. If we consider one moment we shall satisfy ourselves that the necessary principle is naturally returned to the peach orchard in very limited quantities; the seeds being carried off entirely, and nearly all the leaves being scattered by the winds, out of the reach of the roots. As one of the universal laws of nature is the propagation of the species, even at the expense of the vitality of the individual; so when this elementary food becomes exhausted in the soil, the seed draws so heavily upon the resources of the root, bark, and leaves, that they become bankrupt of this fructifying principle, and of course, if there is no further supply to be obtained from the soil, the tree must necessarily perish. When we see then, what large quantities of highly nitrogenized *matériel* the healthy functions of the peach require, can we wonder that when the resources fail, the tree should take the "*yellows*," and die?"

We make this quotation from the remarks of our correspondent, with the view of inviting attention to the comparatively short life of the peach tree when not affected by disease, which may possibly be influenced in part by the nature of the food it requires. The pear is known to grow and flourish for centuries; we have never known a peach tree older than 50 or 60 years; a knowledge of the difference in chemical composition might throw some light on the subject. But that the exhaustion of the soil is the cause of the *yellows*, seems to be conclusively disproved by numerous facts. Some of these are stated in the excellent article of N. Darling, in the second number of the Cultivator, to which our correspondent alludes. Numerous others might be mentioned. We have known young and vigorous trees, growing on the strongest and richest wheat lands of Cayuga county, which had never been occupied before by any fruit trees, take the disease and die. And on the other hand, throughout the western part of the State, where the *yellows* have never yet extended, (with the exception of two or three limited patches, infected from abroad,) we have known trees, growing under all circumstances, on rich and on poor land, on clay and on sand, in new and in worn soil, the trees thrifty and stunted, all perfectly free from the *yellows*; and in all cases where we have witnessed it, it has evidently been

brought from a distance by the importations of trees, or communicated by infection from them. Exhaustion by crops of fruit cannot cause it, for we could cite many cases in trees which never bore; and on the other hand, we have known trees which continued to bear for more than forty years which continued healthy and vigorous.

We may be asked, in what way is the disease communicated, above spoken of. The infection appears to be given in all cases where the bud of a diseased tree is inserted into a healthy stock. Doubtless there would be great danger, in pruning a healthy tree with a knife previously used on a diseased one. It is evidently communicated either by the roots, or by the pollen, perhaps by both; as we have known it to extend from tree to tree from one side of the orchard gradually to the other. A tree which had it one year, was observed to have communicated the disease to the trees standing next to it, but only to the *nearest branches first*, which cannot be accounted for by contact of the roots, as the horizontal pores of the sap vessels would spread the poisonous sap through all the branches during its ascent. The failure of N. Darling, in a single experiment to inoculate artificially by the pollen, only shows that the disease is not thus universally communicated. That infection may result from stones of diseased fruit, seems probable from repeated cases where young imported trees, in perfectly healthy districts, are taken with the malady, and spread it to others. But we must close these remarks, already extended much farther than we intended.

COOKING ASPARAGUS.

We present our thanks to Mrs. N. DARLING, of New-Haven, Ct., for the following communication, and would assure her that we shall be greatly obliged for any further contributions she may be pleased to make to our pages. We would also say to all our lady readers, that they would confer a favor on ourselves and the public by furnishing us with communications on any subject pertaining to the duties of Farmer's Wives and Daughters.

"MR. EDITOR—Not having seen any recipe for cooking asparagus in the mode which I practice, and having met with very little abroad that to me has seemed fit to eat, I am induced to send you an account of my manner of dressing it for the table.

To be first rate, the stalks should be grown from 4 to 6 inches from the ground, and fresh cut. Wash the stalks clean, and cut them in bits about half an inch long. If the stalks are of different sizes, cut the large ones shorter than the small ones, so as to give them an equal chance to boil and get seasoned. The cook should throw aside the stalk as soon as it begins to cut tough; that is, she is to use only the tender part, unless the asparagus is very scarce, when she can divide the tougher from the tender portions, and put the tougher to boil about ten minutes first. Salt the water in proportion to a tablespoonful of salt to two quarts of water, which is sufficient to boil one quart of the pieces in. Have the water boiling when the asparagus is put in, and keep it boiling fast for about half an hour. The best way to know when it is cooked enough, is to take up one or two pieces and taste, for it sometimes cooks quicker than at others, according as it has grown quick or slow. While it is boiling, get ready, say for a quart of the asparagus, 2 slices of bread, cut half an inch thick from a common sized wheat loaf, toasted a light brown, and a large gill of melted butter. When the asparagus is done, take it up with a skimmer, and lay it on a colander or sieve to drain, dip the slices of bread one at a time, first in the hot asparagus liquor, and then in the melted butter. Then put it in the middle of the dish that it is to be served on. When this is done, pour the asparagus over and around the toast, and strew the rest of the butter as evenly over it as possible, when it is ready for the table. If however, the rest of the dinner should not be ready, let the asparagus be kept hot until it is; for if the cook does not serve her asparagus hot, she will lose much of her labor and credit."

"A stitch in time saves nine." In killing weeds, remember this adage, which is as important here as in darning stockings.

FARM HOUSES.

ONE of the most important subjects that can arrest the attention of our farmers, especially such as have yet to provide their farm buildings, is the position, plan, and construction of their houses, &c. If every man about to build, could have the privilege, or be induced to read Mr. DOWNING's excellent work on "Cottage Residences," we should feel that there would be much less necessity for urging the subject of farm buildings upon the notice of our readers. As it is, we hope every one who is intending to build will look over the matter carefully, and consider well what kind of a house his farm, family, location, &c. demand.

The position of the buildings on the farm, with reference to roads, convenience, or health, is a matter of much moment to the farmer. The fashion so prevalent of forcing all the buildings into the road, or as near it as possible, without reference to the condition, or the wants of the farm, is a very great error, and shows a deplorable want of taste and judgment. The less a farmer or his family has to do with the road, except for necessary purposes, the better for all concerned. It is impossible to impart the least degree of elegance, or convey that idea of rural retirement so desirable in farm establishments, and so easily given where judgment and taste preside over the erection of the buildings, to a place where the houses, barns, &c., are on the margin of the highway, or the space in front does not amount to a yard, but only 35 inches. There should be convenient and easy access to the road; but farther than this, the roads are of little account in determining the position of the farm buildings, and should be treated accordingly.

Another point should always be well considered in fixing the location of the buildings for the farm; and that is the arrangement in such a way as to reduce the farm labor as much as possible. If the farm is large, the extra travel of men and teams, in hauling manures, grain, &c., going to and returning from labor, will be very much greater where the buildings are fixed at one extremity, or one corner perhaps, than where their position is central, and access from all parts of the farm direct. This is particularly the case where the buildings are fixed not only at the extremity, but also on the highest part of the farm. How often do we see farmers, for the sake of having their houses so near the road that they can hail, and have a chat with every passer by, draw all their hay and grain to the highest part of their farms, the most bleak and uncomfortable point on the premises, summer or winter, when perhaps there are positions eligible in every respect, and well adapted to the convenience of the whole farm. In all calculations with respect to the labor of hauling to and from the farm buildings, it must be remembered that the quantity drawn to, will exceed in quantity or bulk, and consequently in labor, that drawn from the buildings, by nearly two-thirds.

Health is another thing which must not be overlooked in the location or construction of farm buildings. All low, sunken, swampy places should be carefully shunned. They are the sources of malaria, and if not virulent enough to produce fevers and other diseases at once, the constitution is not the less surely undermined, and predisposed to maladies of every kind. Good, pure water, here, is of the first importance, and no expense should be considered too great to ensure a permanent and ample supply. It should of course have great influence in determining the position of the farm buildings; and cannot be overlooked without subjecting the operations of the farm to great inconvenience, and the health of the family to the most serious danger.

The PLAN of a farm house is a matter of much consequence. Convenience and comfort are the prime requisites, and should never be overlooked; with these should be combined the elegance and taste, so desirable in every farm establishment. A large house is not in ordinary cases necessary; a high house, never. If the house is well arranged, much less space is necessary than most seem to consider, and it is here that a good plan operates most beneficially. A parlor, sitting, or dining room, kitchen and bed rooms are necessary on the ground floor; above, bed rooms should occupy the principal space. Public

opinion is fast banishing the huge two story "shingle palaces," that once were so fashionable as farm houses, and the far neater, compact, and comfortable cottage style of buildings, is fast taking their places throughout the country. This is one of the most cheering indications that those who have endeavored to diffuse more correct notions on the subject of farm buildings, have not labored in vain. Those who wish to consult plans, drawn with particular reference to the wants of the country, will find many of them in the past volumes of the Cultivator, or in the beautiful volumes of Mr. DOWNING on "Landscape Gardening," and "Cottage Residences." There are few if any plans, however, into which, in consequence of particular location, position, size of family, &c., changes in some respects, may not be advantageously introduced; but the study of such plans, where they are combined with the elevation of the building, and arrangement of the grounds, cannot be otherwise than useful, as correcting false notions, and aiding the arrival at correct decisions. We may here remark that but few builders have any idea of what constitutes a tolerable farm house. Those in the city, form their plans for the city rather than the farm; and those in the country, have in general too little acquaintance with the principles of the art, or are not sufficiently familiar with the great improvements made in the construction of farm residences, to enable them to meet the wishes of those who desire houses in which utility and elegance are united. There are, however, some honorable exceptions, as the farm buildings in some districts prove; and when once the attention of farmers is directed to this point, where they are qualified to form a correct opinion of the buildings they need, there can be no doubt that builders competent to aid in carrying out their plans will be found.

In the construction of farm houses, it is important that the best materials be selected, and that strength, firmness, and durability be consulted in all proceedings. Where stone or brick can be conveniently obtained, houses built of these materials are doubtless to be preferred. Their advantages over those constructed of wood in the ordinary manner are very great. They are not only more durable, but the equality of temperature they afford at all seasons, as compared with structures of wood, is favorable to health. In a well constructed house of stone or brick, the saving of fuel is very great, an object of no small consequence, where fires of some kind are necessary in our rooms two-thirds of the year. There is one serious objection against stone or brick houses, which is, their liability to accumulate dampness in the walls, thus destroying or discoloring the plaster or paper, and rendering them in some instances decidedly damp and unwholesome. This objection is however, easily obviated, and the evil prevented, by what is called *furring*, in which the walls are in effect, made double, a space of an inch being left between the lath and plaster and the brick wall, through which air circulates, rendering the interior part, or the plastering, perfectly dry. Convenience is the great point to which other things must be made subservient in the construction of farm buildings; show is but a secondary consideration. In our climate too, reference must be had to preserving a comfortable temperature during our severe winters; a result to be obtained by a choice of location for the buildings, by a proper arrangement and position of the rooms to be occupied by the family, and by such a construction as shall exclude the direct admission of the external atmosphere. Experience abundantly proves that so far as the comfort and the health of the family is concerned, no room occupied by them, should open directly upon the outer air. By connecting them with halls, abrupt transitions from heat to cold, and vice versa, are avoided, and consequent illness frequently prevented. Ample means for ventilation, and the free circulation of air, should always be provided, a precaution necessary to health, and indispensable in the sultry months of an American summer. We hope that every farmer who intends building, will look at the matter carefully, consult the wants and capabilities of his farm, and while he avoids all ridiculous speculations or imitations, see that his plans combine as far as possible, elegance with utility, and simplicity of structure with correctness of taste, in the design.

VERMONT FARMING.

WE are indebted to Mr. J. P. FAIRBANKS for a copy of the *Caledonian*, containing the statement of Mr. Fuller, who obtained the second premium for the best managed farm, from the Caledonia county (Vt.) Agricultural Society. Mr. Fuller's chief attention is given to grazing and the dairy, his farm not being, as he says, well adapted to cultivation. He appears to be a good farmer, and his course of management is undoubtedly in many respects worthy of imitation by others in similar circumstances.

What land he tills, is broken up from the sward in autumn, and sowed the next spring with oats; the stubble plowed in soon after taking off the crop, the next spring manured and planted with potatoes. The third season it is sowed to wheat, and seeded down with ten to twelve pounds clover-seed, and four to six quarts herds grass, (Timothy?) to the acre. He states that within two or three years, he has found the furrows of green sward which laid one against the other at an angle of forty-five degrees, produce a much better crop of oats than when turned over flat. He does not particularly inform us in regard to the nature of his soil, but from the remark that it is better adapted to grazing than to cultivation, we suppose that it is rather moist and heavy. If this is the case, it would account in some degree for the advantage of the mode of laying the furrows which is spoken of.

Breeding stock.—In regard to the question whether cattle can be best improved by foreign blood, or by attention in selecting from the native breed, Mr. Fuller gives a decided preference to the latter mode; and observes that were two or three farmers in each town in the county to turn their attention to the matter, the object would soon be accomplished; whereas by the other course, he thinks "half a century may elapse before any think like a general improvement is effected." The grounds for the opinion thus so positively expressed, Mr. Fuller does not give us; but we should think a very extensive experience and observation were necessary to justify so broad an assumption. He does not tell us what trials he has made, or has seen made, with particular breeds, or their crosses, which it is important to know before we can judge of the correctness of his opinion. An experiment with a single animal, or with two or three animals, by no means proves the character of a whole race or breed; much less does an experiment with one "imported breed," prove any thing in regard to the character or usefulness of other breeds. As to the lapse of "half a century" being required "before any thing like a general improvement is effected," we will just remark that we could point to hundreds of cases where a great and acknowledged improvement has been made in a single generation of stock; and what is the insuperable obstacle to such improvement becoming "general" in five years instead of fifty? Let all the best bulls in the country be so disposed of that they may be used to the best advantage, and we are much mistaken if a "general improvement" is not effected and admitted in the time we have mentioned.

In saying this, we would by no means discourage improvements by selections from the best of the common stock, especially where better animals can be had than are offered by the imported breeds. Mr. Fuller's course for example, has been attended with advantages, though we can perceive no evidence that he has effected greater improvement than could have been attained by proper crosses with some imported breeds. His principles, so far as any are given, for breeding *dairy* stock, are undoubtedly good. He says, "care should be taken that the mother of the bull should possess all the qualifications of a good cow." He gives his mode of rearing calves, which appears to us to be economical; while at the same time, the results show that his stock are not only well managed and cared for, but from the size they attain at an early age, and the butter obtained from the cows, they must also be of good blood. His calves are taught to drink when two days old, and for eight weeks are allowed seven quarts of milk per day. For two or three weeks afterward, they are allowed a less quantity, when they are weaned and turned into good pasture, with

salt always by them. When the potatoes are being gathered in the following fall, the calves are let into the lot, where they soon learn to eat this vegetable. The following winter they are each fed with a quart of potatoes per day till spring. By this method he says he has "never failed of having 2 year old steers that would girth from 6 to 6½ feet the fall after they were two years old. Live weight from 20 to 23 cwt."

We cannot avoid calling particular attention to the dimensions and weight of these steers. The girth, though not extraordinary, shows good steers for that age; but the weight in proportion to the girth is wonderful! We know not what may be the peculiar shape or proportions of these cattle, but from twelve to fifteen hundred is as great a live weight as we ever heard of in animals of the girth given. Again, what would be the dressed weight of such cattle? Ordinarily, the dead weight of cattle of the girth he mentions, would not exceed 675 to 875 lbs., hide and tallow included. But the usual dead weight from as great live weight as he mentions, "20 to 23 cwt.," is not less than 1350 to 1550 pounds. Mr. Campbell's prize ox, which was slaughtered in this city in Feb. last, weighed alive only 2546 pounds, yet he girthed, by our own measurement, nine feet, and weighed, as we stated in our last, 2102 lbs. in beef, hide, and tallow. Is there not some mistake in Mr. Fuller's calculation about the weight of his two year old steers?

Produce of butter per cow &c.—Mr. Fuller states that he has never given his cows meal or roots, "worth naming," but for ten or fifteen years past, they have averaged 200 pounds of butter from each cow. Has had cows which in the month of June would give 52 pounds of milk per day for one week, but considers 30 pounds a good yield. He has made from one cow, in the month of July, sixteen and a half pounds of butter per week—the cow being fed only on grass, and allowed salt. He milks his cows early in the morning, and between five and six o'clock in the afternoon, they are milked again. In summer, he never yards his cows. Much of his pasture has never been plowed, and he doubts whether plowing would improve it.

ADDRESS to the Addison county (Vt.) Ag. Society, by the President, S. H. JENISON. This is a valuable document, containing sound practical remarks, and much statistical information in reference to the agriculture of that section. We have not room for an extended notice, or for long extracts, but would call attention to one or two important facts mentioned in reference to stock. He observes that the excellent grazing qualities of the soil of Addison county, have been long known. It would seem from what is stated, that the herbage was believed to possess some peculiar qualities, for Mr. J. states he has "heard it remarked that the butchers of Brighton could distinguish by the appearance and feel, the fat cattle from this part of Vermont, from those in market from other places, and that cattle from this part of the State, of the same apparent flesh, had always the preference, opening better, having a greater quantity of tallow, and beef of superior quality and flavor." If there was no mistake about the superiority of these cattle having been as obvious as represented, was it not attributable in a good degree to the breed? This seems probable, as we are informed by Mr. Jenison, that about the period alluded to, "improved breeds of cattle were introduced into various parts of the county by public spirited individuals." And in reference to the benefits of the introduction of this stock, he observes "every neighborhood can even now furnish a trace of it. I am aware," (he continues,) "that some are strongly biased against improved stock; but I venture the assertion that, where a favorite individual is found, could the pedigree be traced, in most instances you would not go many removes back before you would run against some one of the imported, improved breeds."

COTTON BEDS.—In relation to the article on cotton beds, which appeared in the Dec. Cultivator, the *Louisville Journal* says—"Cotton beds are becoming very much used in steam-boats on the western rivers, and are considered superior to any but hair."

DR. LEE'S REPORT ON AGRICULTURE.

The following report from the Committee on Agriculture, to whom was referred so much of the Governor's Message as relates to that subject, was submitted to the House of Assembly of this State, by Mr. D. LEE, on the 20th March:

Speaking of agriculture, the Governor says: "The interest involved is not merely the most important committed to our charge, but more important than all others."

This is no more than a just appreciation of that portion of the public interests committed by the House to the charge of your committee. Happy shall we be if any thing we can say or do shall serve to lessen the hard work now expended in producing a pound of wool, a firkin of butter, or a bushel of wheat.

Agriculture is a subject that public men are far more inclined to praise than to aid by any legislative enactments. However others may regard the interest of rural industry, your committee believe that, while legislating for half a million of farmers, we owe them something more than empty commendation, something better than a heartless lip service.

It is known to all that no class in the community give so much muscular toil for \$100, as do the common field laborers in the State of New-York. The hard work of skillful farmers is bought and sold at nine or ten dollars a month, and twelve hours' toil is cheerfully performed each day. But the mechanic, the banker, the merchant, the broker, or the professional gentleman, thinks his service very poorly rewarded if he do not receive three or four times that sum.

If a man whose whole life is devoted to the cultivation of the earth, does not and cannot earn so much as the merchant, the physician or the lawyer, in the course of a year, pray tell us what is the cause of this inability, that wise legislation may remove it. And if the agriculturist does earn as much as any non-producer in the State, then please inform us how it happens that an experienced farmer must sell his labor at \$120 a year; when he cannot hire one experienced in the mysteries of the law or medicine for less than \$1,000 a year.

Surely the toiling husbandman needs, if he does not deserve, as many good meals, as much good clothing, and as fine a house as one that merely studies to acquire, not to produce, the good things of this world. Nevertheless, the fact is notorious that the great body of our rural population somehow contrive to work a little harder and fare a little poorer than any other class in the community.

We learn from reliable statistics that paupers increase among us much faster than population. The number that live from hand to mouth, only one step from the poor-house, is increasing with fearful rapidity. There are already more than 500,000 people in this State wholly dependent on their daily labor for their daily bread.

No government can exceed us in bestowing idle praise on honest productive industry. But what has this Legislature ever done to secure from the grasp of avarice, to each hungry mouth and naked back, a fair equivalent for all the food and raiment called into existence by the mind and hands which God has given to each person?

In our fierce scramble to exchange with the common farmer ten hours' work for ten days' work, are we sure that we do not trample under our feet every principle of justice, and every right of humanity?

What great public good is there in a system of legislation, which operates practically in a way that gives to one family ten times more than it really needs, and compels twenty families to live on half allowance? How long shall we foster in the breasts of a favored few, that morbid "love of money" which is the "root of all evil"?

Never till this unnatural appetite for needless wealth shall be abated as a public nuisance, by removing from the masses the ignorance that feeds it, will agricultural labor be as well rewarded as the mis-employed intellect, which now reaps where it has never sown. The increasing pauperism, suffering and crime, so common in the land, spring not so much from a lack of the comforts of civilized life, as from their unequal and unjust distribution.

If the legislature will do as much to instruct the producing classes how to keep and enjoy the entire proceeds of their honest toil, as it does to teach all non-producers how to exchange their shadows for the workingman's substance, nine-tenths of our growing taxes for the support of the poor, and the punishment of crime, will cease forever. On the contrary, so long as three-fourths of any community, give the products of three, four, or six hands, for the little earnings of one hand, just so long will hungry mouths, naked backs, and houseless heads, claim assistance by a tax on the property of those that are better off. According to the official report, the direct tax in this State for the year 1844, was \$4,243,100. This will soon be \$8,000,000, unless we cease to manufacture paupers, criminals, and needless litigation.

In the common business transactions of society, men submit to be plundered an hundred times, from a seeming necessity. This necessity will always occur, so long as we refuse to be content with a sum equal to the products of one pair of hands. We violate a law of our being, when we strive to obtain a sum equal to the earnings of two intellects, and of four hands. It is obvious that should one-half the community succeed in acquiring a sum equal to the products of three hands to one human being, the other moiety must of necessity limit all their food, clothing, houses, farms and other property, to an average product of one hand to each person. Such is the present lamentable result of our past unwise legislation. If the alarming evils of this system be not corrected, is there not reason to fear that it will at no remote period, call down the terrible but just punishment of Heaven?

Before we prescribe a remedy, let us view the malady in another aspect:

"To know ourselves diseased, is half our cure." Our intense anxiety to acquire property without producing it, is an eating cancer on

the body politic; and he is no patriot, who is unwilling to have the sore probed to the bottom.

There are in this State, at least ten thousand persons, that enjoy incomes, on an average, of \$2,000 each, derived from interest on money, rents, and for personal services. This secures to them an aggregate annual income of \$20,000,000. Estimating the average value of rural labor at \$200 per head, and it will be seen that these 10,000 rich men, draw from human muscle and thought, a sum equal to the entire products of 100,000 farmers.

Of this large sum, they may consume as much as 50,000 laboring men produce, and then lay up annually \$10,000,000. Let us suppose this money is re-loaned, at an annual interest which will double the principal in twelve years. In that length of time the income of one year will become \$20,000,000, and in twenty-four years it will become \$40,000,000.

In connection with the above figures, it is important to bear in mind that while interest augments the principal four fold in a quarter of a century, the increase of laboring people to work and pay this interest, is only 100 per cent, in the same length of time. Now, is it not clearly demonstrated that, by increasing our tax on productive industry four times faster than the human family increase to work and pay such tax, that pauperism must also increase much faster than the population?

Had not the productive power of man's physical strength been largely expanded by the aid of labor-saving machinery, propelled by steam and water, within the last twenty-five years, the number of paupers in this State, and of those just above public charity, would be double what it now is.

One of the greatest misfortunes that fall to the lot of the farming community is their extreme proneness to incur liabilities, and undertake the payment of interest. Those people do not sufficiently study the relation that capital bears to humanity. They forget that a human being, who must have more than 1,000 meals, to say nothing of clothes, in 365 days, cannot safely offset his productive labor against the service of dead matter.

He should freely give for the use of capital, all it can earn without the aid of human muscle and thought, but no more. The poor farmer should ever bear in mind the fact that no amount of silver can possibly produce one kernel of wheat; and if he offset his industry against the use of 3,000 silver dollars, he must either eat what he had before earned, or what some other man produces, or he must starve.

How cruelly have thousands suffered, because they failed to remember that a debt on land will last for 100 generations, and extort from poor, toiling humanity, an annual tribute more remorseless than the grave. Beware, then, how you degrade the human intellect, and human flesh and blood. These greatly need, for their full development and comfortable support in infancy, manhood, sickness and protracted old age, the entire proceeds of one pair of honest hands. Never forget that whatever you give to inert matter, is so much stolen from a living soul and living body. This great truth should be known, that no man can make a beast of burthen of his physical frame, and not inflict infinite wrong on his immortal mind. To supply our natural physical wants, no one need labor beyond what is necessary to impart health and vigor to his body and his mental faculties. Why, then, degrade a human being almost to a level with the ox that he drives, by compelling him, like the patient ox, to give to the world twice as much as he receives in return? It is thus that we create that rebellion against our unwise and unjust laws, which calls for the brute force of military power. It is thus that we are so successful in filling our poor-houses with paupers, and our jails and prisons with criminals.

Suppose a paternal government, acting on the principle of equal and exact justice, were to credit every member of the community, every family in the State, with all the good things produced by the same, and should debit each person and each family, with all they have ever consumed, how few could show a balance in their favor of \$2,000? Under a system of just debit and credit with every mouth, back, and pair of hands, how many who are now rich would be bankrupts for thousands? How many, now really poor, would rejoice in their comfortable circumstances?

Suppose every man that has \$3,000 at interest, were compelled to work at 75 cents a day, to pay his own interest? Who then would care to overreach his neighbors, and acquire \$3,000 which rightfully belong to the families that gave them existence?

It is because \$3,000 will draw for its holder, from human bone and muscle, 200 days' work a year, for ten generations, that we are all so anxious to acquire the means thus to eat bread by the sweat of other men's faces, rather than by the sweat of our own. Humanity gains nothing by the circumstance that capital so often changes owners. To the producing classes, who work 100 days at 70 cents a day, for the service of \$1,000 a year, it matters not whether this money has shifted owners a thousand times, or only once.

Having thus briefly noticed a few of the evils which affect most injuriously the great agricultural interest of New-York, your committee regard it as a part of their legitimate duty to suggest a remedy.

The objects sought to be attained are these:

First, to increase the productiveness of rural labor.

Secondly, to secure to every cultivator of the soil the entire proceeds of his better directed and more productive industry.

On what does the productiveness of the farmer's labor mainly depend? Surely not on his mere muscular strength, for in that case the mechanical power of a cart-horse will exceed five fold in value the labor of an agriculturist. It is the sound judgment, experience and acquired knowledge of the directing Mind, that imparts productive value to the labor of human hands. And it is mainly because the intellect employed in rural pursuits is less developed than the mind devoted to other and more professional occupations, that agricultural labor is so poorly rewarded. The truth is that passive intellectual faculties are utterly valueless. They produce nothing. Hence, as the mind of a human being lacks science or knowledge

the market value of his mere physical force depreciates in price. Without going into an elaborate argument, your committee appeal to the ten thousand improvements of the age in which we live, as furnishing conclusive evidence that there is no power on earth so productive of great and beneficent results as the power of highly cultivated intellect.

Those that follow the plow, and swing the axe, and gather the harvest, have not, as a class, been instructed in the sciences which reveal nature's process for changing earth, air and water, into bread, meat and clothing. Hence, to manufacture a barrel of pork, or flour, a firkin of butter, or 100 pounds of wool, from the ingredients necessary to form those agricultural staples, the farmer loses one-third or one-half of his labor by its misapplication. To make one ripe wheat plant, nature requires no fewer than fourteen simple and distinct elementary bodies. Each one of these substances has peculiar properties, and not one can serve as a substitute for another.

The laws established by the Creator of the universe, which govern all the changes in the form and properties of matter, whether in a crude mineral or in an organized condition, making the living tissues of plants and animals, are as uniform and unerring as the laws that regulate the rising and the setting of the sun. By studying the operation of these laws, the practical agriculturist is often able to effect a result in a day, which he could not accomplish in a week, while working against the purposes of nature.

It is not far from the truth to say, that 400,000 of the 700,000 children now attending our common schools, are destined to become practical operatives in the great art of making *something* into grain, grass, roots, milk, butter, cheese, wool, fat, lean meat, bone or some of the other numerous products of rural labor. *Where* that something can be found, and *how* the raw materials of all cultivated plants should be combined, so as to give the largest return for any given amount of capital and manual toil, are problems in practical husbandry, which science alone can solve.

If the ashes obtained by burning a ripe wheat, rye, oat, corn, barley or timothy plant, be analyzed, not far from 80 per cent will be found to be silica, or common flint sand. This silica is an indispensable ingredient in the above named crops: and yet, not one particle of this mineral can enter the root of any plant except it be dissolved in water. Now, of all earthy substances, flint sand is the most insoluble. Indeed, you may boil it for hours in aquafortis, sulphuric or muriatic acid, without dissolving it. How, then, is the practical farmer to dissolve this mineral, which, more than all other, forms the *bone* necessary to give strength to the stems of his grain, that they may hold up, without falling, the load of ripe seed in the ears?

Chemically speaking, silica is an acid, and will unite with a large dose of the two alkalis, potash and soda, and form a soluble silicate of those bases.

This explanation reveals the reason why the alkalis in wood ashes are so valuable as fertilizers on sandy soils. On comparing the analyses of maple, beech and oak ashes, with those obtained from cereal plants, there will be found a striking similarity in their respective constituents.

Next to clay, sand and potash, lime, soda, phosphorus, sulphur, chlorine and iron, are the most important minerals found in cultivated plants. To prepare these ingredients for use, the following is a cheap and easy process.

Take ten bushels of newly slaked lime, i. e. ten before it is slaked, and mix it thoroughly with twenty bushels of loam or vegetable mold. Add to the heap five bushels of common salt and an equal amount of plaster of Paris; moisten till the mass is like damp earth.

The plaster will furnish sulphur, and the common salt will yield both soda and chlorine. The latter will leave the sodium and unite with the caustic lime, forming a soluble salt, called the chloride of calcium. The sodium being first converted into soda, will then combine with the carbonic acid from the air and organized matter in the vegetable mold, and form a precious alkaline salt, which will dissolve common sand. This compound still lacks phosphorus and iron. Ground bones furnish the former and copperas the latter mineral. If one can get the liquid excretions of domestic animals, or of the human species, and saturate the compost heap with this compound of ammonia, phosphoric acid, and of other valuable matters derived from plants, the fertilizing properties of this artificial manure will be greatly increased.

There is no branch of business in which the sciences of geology, chemistry, and of vegetable and animal physiology, are so useful to man, as they are to the practical husbandman. The term science, is but another name for knowledge. It is, however, usually limited in connection with natural phenomena, to the systematic investigation of the laws of nature. Of all men, the practical farmer is most interested in understanding and obeying these wise and salutary laws.

The fact is susceptible of demonstration, that from a general ignorance of these laws, we have wasted in the State of New-York, within the last twenty-five years, the indispensable ingredients that go to form both *bread* and *milk* for our children, which, if placed in New-York and Boston markets, would sell for one hundred millions of dollars.

The guano imported into Great Britain last year, sold for \$4,000,000. It is retailed in Western New-York by an exchange of four pounds of flour for one of guano.

To make an acre of wheat that will yield 20 bushels, the plants must have twelve pounds of phosphorus. To purchase that amount of a substance, which forms one of the constituents of the human brain, at a druggist's shop, will cost \$24.

The fact is notorious that there are thousands, if not millions, of acres in this State which once bore 20 bushels of good wheat per acre, that now yield not more than ten bushels. To make our twelve millions of bushels of wheat a year, we annually consume about 7,000,000 pounds of phosphorus. It is the phosphate of lime contained in grass and hay, derived from the earth, out of which all our domestic animals form the solid, earthy portion of their bones. At present prices the phosphorus and ammonia, annually thrown

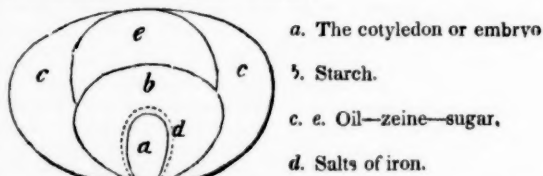
away in the solid and liquid excretions of man and his domestic animals, are worth some \$20,000,000.

A cargo of guano—phosphorous and concentrated nitrogen derived from the fish on which sea-fowls feed—arrived in New-York a few days since, which will sell at some \$60,000! What consummate folly to throw away the raw materials which form our daily bread!

In a work just published in this country, M. Boussingault states that he has seen fields on the table lands of the Andes, which have produced excellent crops of wheat *annually*, for 200 years. Guano is the fertilizer used on these fields.

Recent experiments in Scotland have demonstrated the practicality of growing 44 bushels of wheat on an acre having only 1½ per cent of organized matter in the soil. It must contain, however, to a limited extent, each of the 14 simple elementary substances which form a wheat plant.

The organized arrangement of the phosphate of lime and magnesia, in an embryo corn plant, and the locality of the salts of iron, zeine and starch, are worth knowing. The following diagram illustrates the section of a grain of corn:



In the cotyledon or germ, is deposited the phosphates which form the bones of animals, and also most of the glutinous substance which is indispensable in the formation of lean meat, tendon, tissue, and the jelly found in bones. Hence, when the mouse eats out the chit of a kernel of corn, he gets the raw material to make muscle, bone, and brain; and by taking into its stomach the iron in the dotted line *d*, this little animal, as well as the ox and man, obtain the substance which gives color to the blood, and with oxygen, the vital heat of the system.

The iron in venous blood, is in a state of protoxide. This fluid is loaded with carbon, if not carbonic acid. From these causes venous blood is much darker colored than arterial blood. In the latter the iron is a peroxide, imparting to the blood a light vermilion hue. The fact has often been demonstrated, that the air expelled from the lungs of a warm blooded animal contains 100 times more carbonic acid than the air taken into these organs. As the arteries leading from the heart penetrate every part of the living frame, they convey vital gas—oxygen, condensed in the peroxide of iron—to every portion of the system. This oxygen, while the blood is passing through the tissues from the arteries into the veins, combines with that portion of carbon which has performed its office in nourishing the body, and carries it, in the form of carbonic acid, through the veins, heart and lungs, into the ever moving atmosphere.

In thus burning the waste carbon in the system, oxygen gives out just as much heat to the surrounding matter as it would, provided an equal quantity of vital gas had burnt an equal amount of fuel in a stove.

Every body knows that active exercise will warm him in cold weather—that a horse driven forty miles a day will breathe oftener, evolve more heat and consume more food, or fuel, than he will when standing quietly in a warm stable. The waste oxygen and hydrogen will escape from the lungs of the animal, if quiet, in the form of vapor; in perspiration also, if driven hard. This sweat will carry with it some nitrogen and saline matter, which sometimes crystallizes on a horse by the evaporation to dryness of the liquid that escapes through his skin. But most of the valuable salts taken from the earth in the food of all animals, escapes by the kidneys and bowels.

As the demand for carbon to form fat, muscle, cellular tissue, bone, brain, hair and wool, as well as to keep up a continuous heat of 98° night and day, is very great, it will be seen why *starch* is so abundant, not only in corn, as above indicated, but in all plants used as food for man or beast. Starch contains a large amount of carbon.

It is well known that if a bin of corn be moistened, it will heat and grow or rot. In the process of sprouting, a seed first imbibes some portion of the vital gas that surrounds it, which, uniting with the carbon in the starch, forms carbonic acid and evolves heat. When starch thus loses one portion of its carbon, it is changed into a kind of *sugar*, making, as is well known, sweet bread from wheat a little grown. If a grain of wheat be surrounded by a little waxy clay, only a half inch in diameter, it will not sprout, because oxygen gas cannot penetrate the compact earth. By sowing grain in wet weather, so that the harrow covers the seed with mud, thousands of bushels are lost.

It is a matter of great practical importance to know how to develop a large, vigorous growth of roots. On a poor soil this can only be done by the aid of science. Deep plowing and a thorough pulverising of the soil are indispensable to accomplish this object.

If it cost the farmers of New-York twice as much land and labor to produce a bushel of grain as it does their competitors out of the State, how are the cultivators of the earth among us to prosper?

All the farmers in the Empire State should rise as one man, and insist that the science of keeping property, shall be taught in all their common schools.

The same mental cultivation which will enable an honest tiller of the soil to double the products, and double the value of his better directed industry, will also qualify him to keep and enjoy a much larger portion of the nett proceeds of his labor.

Your committee have been constrained to believe that much of the opposition to agricultural schools in this State, has arisen from the well grounded apprehension that if we place the farmers of New-York on a par with professional men, in point of attainments, they

will cut off at the fountain the large fortunes which now flow into the hands of men who really produce less than they consume.

These educated farmers will demand, it is feared, an equal share of the honors that accrue to our executive, judicial and legislative officers, and hence the light of science must be shut out from their understandings.

It is now twenty-six years since the friends of agricultural improvement first made a serious effort to establish an agricultural college in this State. Your committee have before them an essay published in this city, in 1819, of forty-two pages, advocating such an institution with unanswerable arguments.

At a later period the lamented Judge Buel succeeded in procuring a naked charter for such a school; but not a single dollar could be obtained to aid private enterprise in teaching the unerring laws of nature to the young men who are to pursue the modern art of transforming solid rocks into fertile soils, and these again into human food and raiment.

Wise legislators conferred unlimited authority on a few Canal Commissioners to expend indefinite millions in cutting and beautifying *inanimate stone* along the line of the enlarged canal; but the law making power refused to grant one dollar to teach the science of rural economy to the sons and daughters of practical farmers. Within the last twenty-six years there has been taken from the public treasury about \$200,000 to prepare the candidates for legal honors to study successfully the science of law. We have also four well endowed medical colleges, now drawing from the public funds \$5,500 a year, besides \$200,000 before received.

We have so long paid a large bounty on all branches of unproductive industry that no young man, of any honorable ambition, will consent to toil, and sweat, and burn in the sun on a farm, for \$10 a month, when as a clerk in a store, a bank, a broker's office, or as the student in a doctor's or lawyer's office, he can expect, in the course of twenty years, to command five dollars to one, and at one-fifth of the severe bodily labor exacted of the practical agriculturist. But can all our ambitious young men become professional gentlemen, without rendering these professional pursuits utterly valueless? If learning and science are the great highways to honorable distinction and public favor, why deny these advantages to those that do more than all others to feed and clothe the whole community?

It is true that science is the greatest leveler in the world, but, unlike the leveling of ignorance and brute force, it ever levels upward. It takes the highest point of mental attainment already achieved for its standard; and then wisely and humanely attempts to elevate all below up to that standard.

The object of this effort is to make the triumph of *mind over matter* universal and complete. All men, blessed with a common share of common sense, should have, in their every day business operations, the full benefit of the best lights of modern science. Science gives to the poor man unknown and ever increasing power over heat, light, electricity, chemical attraction, air, water, and the solid substances which form the surface of the globe.

All these elements are brought into requisition by nature, in changing crude mineral matter into living, organized beings—into the cultivated plants and domestic animals, produced by the labor of the husbandman. To increase the knowledge of the producing classes does not detract, in the least, from the attainments of any class that may stand, or think they stand, above the common average of the community in which they live.

Why shall we refuse to do as much to make skillful and scientific farmers as we do to make skillful doctors and lawyers?

There are 11,000,000 acres under cultivation in this State, yielding an average product worth \$7 per acre. Communicate to the half million of men who cultivate these lands a knowledge of the laws of nature which govern all the results of rural industry, and instead of exhausting the soil of its bread-forming elements at the rate of millions a year, they will improve the land and harvest, at the same cost in labor, three dollars per acre more than they now do. This will add to the productive value of our agricultural industry \$33,000,000 a year, and to the revenue of our canals more than one million of dollars. For a large portion of this will go to the cities on the seaboard, and be paid for in goods to be returned through our canals to the consumers. Thus the property dug from the earth will contribute a double toll to the State.

Who cannot see that commerce, manufactures, and all other pursuits in civilized society will be largely benefitted by increasing the productiveness of rural labor? Hence, whatever we give to agriculture is truly given to all classes. By unwise cultivation we have all consumed much of the constituents of human food and clothing that a bountiful Providence spread over the virgin earth in the Empire State. Science now comes to our aid, and teaches us how to change a cold, compact *subsoil*, into a loose, friable and most productive surface soil. It reveals to us *why* it is that a good soil will produce 100 pounds of ripe wheat plants, and yet lose only 15 pounds of its weight and substance by the operation, eighty-five pounds coming from the atmosphere.

In combustion, respiration, and by fermenting and rotting, an immense amount of organized matter is decomposed, and dissipated through the air. These gases are all soluble in water. Hence, all the carbonic acid expelled from the lungs of all animals, and the ammonia formed by decomposing organized substances, are dissolved in the rains, snows, and dews in the atmosphere, which fall to the earth, and pass into the roots and circulation of cultivated plants. The leaves also imbibe from the air a very considerable amount of vegetable food.

There are a thousand reasons why the laws of nature should be carefully studied, and as carefully obeyed by our whole rural population. It is by this means alone that they can largely increase the products of their honest toil, and keep for the benefit of themselves, and their helpless offspring, those surplus earnings which now go to form the immense fortunes of capitalists. England and Wales have a million and a half of public paupers. Do we desire an equal ratio,

as compared with our population? If not, then some power must protect the inalienable rights of labor and humanity.

To make a beginning in this great enterprise of universal education which aims to unite *science with labor*, your committee beg leave to introduce a bill, appropriating five thousand dollars a year, for three years, to the Fairfield Medical College, on condition that the institution shall be connected with a model and experimental farm, for the purpose of teaching both the science and the practice of agriculture. This college was chartered in 1811, and has peculiar and strong claims to the favorable consideration of the Legislature. It has about \$15,000 invested in college buildings, which are worthless for any other than educational purposes. The experiment then, if any choose so to regard it, can be tried at this institution cheaper than to erect a new establishment. The trustees are eminently practical men, and will be under the strongest inducements to give success to the undertaking. The college has a library and chemical apparatus worth about \$2,000, and many conveniences which will be valuable to an agricultural school.

THE AMERICAN HERD BOOK.

To accommodate such Short Horn breeders as wish to insert pedigrees of the increase of their herds this spring, in the pages of this work, it will be kept open till the first of July next; by which time it is hoped that all who wish to register their cattle, will forward their respective pedigrees. The lists are fast coming in, and it will be a source of pleasure to the subscriber to make them as numerous as possible, that the array of American Short Horns shall at least show some sort of respectability to their friends on the other side of the Atlantic.

Black Rock, N. Y., April 1845.

L. F. ALLEN.

EXOTIC, NURSERY, AND HORTICULTURAL GARDENS,

Flushing, L. I., near New-York.

THE subscribers having established a Nursery with the above title, with the determination of conducting it in the very best manner in all its departments, offer for sale, at *reasonable prices*, a *select* variety of FRUIT AND ORNAMENTAL TREES, Hardy Shrubs, Herbaceous Plants, Grape Vines of all the best kinds, superior Strawberries, Fastolf Raspberry, Gooseberries, &c. BULBS and TUBERS, superb CARNATIONS, DAHLIAS, &c., and a most extensive and choice collection of GREEN-HOUSE and STOVE PLANTS, embracing every thing *new and beautiful* in that department, personally selected in Europe during the past summer, of ROSES and CAMELLIAS.

We have a very choice collection of the former, full 1,000 varieties, and of the latter nearly 300, all in fine order.

Catalogues of the above will be sent gratis to all applicants, *post paid*, and every order promptly executed. From unknown correspondents, a remittance, draft, or satisfactory reference expected.

May 1, 1845—eom.

VALK & Co.

TO LAWYERS, MERCHANTS, MECHANICS, FARMERS, PUBLIC OFFICERS, &c.

AMERICAN GOVERNMENTAL AGENCY, WASHINGTON.

ON retiring from his official station as Assistant Post Master General, JOHN S. SKINNER, devotes himself to the transaction of GENERAL AGENCY BUSINESS, particularly in connection with the various Departments of the National Government—business in which he is henceforth associated with HENRY O'REILLY, of the State of New-York.

Persons in any part of the United States, who have business to transact with either Department of the General Government at Washington, or with any of the State Governments, or who require researches to be made in the Public Records any where in the Union, can have their requests promptly attended to, by addressing the undersigned.

Extensive acquaintance throughout the Union, consequent on the long continued connection of both the undersigned with the Newspaper Press, with the Post Office and other Public Organizations, will greatly facilitate the prosecution of inquiries and transaction of business through their Agency.

Lawyers, Public Officers, Contractors, and others having business arising under contracts, or under the Pension, Post Office, or Patent Laws—MERCHANTS desiring remission of duties, &c.—MECHANICS or Inventors requiring Patents—and FARMERS having business with the General Land Office—may find this Agency conducive to their interest in the way of promptness and economy. Claims under treaties with the Indian Nations or Foreign Governments also attended to.

Special attention will be paid to those who wish to buy or sell LANDS in Virginia and other Southern States; and inquirers from the North or South, are respectfully referred to our Circular concerning "Agricultural Improvement in the Southern States," lately published in the Globe, Intelligencer, and other Journals.

Letters must be *post-free*, to insure attention; and may be addressed to the subscribers, either at Albany, New-York, or Washington—particularly at the latter place.

JOHN S. SKINNER.

HENRY O'REILLY.

Sensible of the manifold courtesies with which he has been honored by editors of all parties, from the time when he established the first Agricultural Journal in America more than a quarter century ago, JOHN S. SKINNER adds this note for the purpose of saying that it will afford him great pleasure to maintain the intercourse thus long continued, and to reciprocate the services of editorial friends who may now favor him with a few insertions of this notice.

May 1, 1845.

CATALOGUE OF

IMPROVED SHORT HORNED CATTLE,

The entire herd of E. P. PRENTICE, to be Sold at Auction, at Mount Hope, near Albany, on Wednesday, the 25th day of June, 1845, at 10 o'clock, A. M.

MR. PRENTICE takes leave to say, that if he could have made the sale sufficiently inviting, he would much have preferred to offer but about half this stock. But, to guard against the impression that the best have been selected, he begs to assure the public, that the entire herd shall be sold without reservation; except, as provided by his published advertisement, in order to retain the blood of some highly valued families, which have been secured at great expense and which could not be replaced, he will ask leave to bid, *openly*, on three or four individuals *only*, they first being designated.

The open numbers attached to the pedigrees, refer to Coate's Herd Book. Those inclosed in parenthesis, to this Catalogue, and the letters to the progenitors, whose pedigrees are given in the Appendix.

Several of the cows and heifers, not yet calved, will come in before the sale, and at that time it will be made known when others are to do so, and by what bulls.

The cattle may be inspected at any time previous to the sale, and any information relating to them will be most cheerfully given.

CATALOGUE.

1. FLORA—Roan cow, calved June, 1837, and imported in 1839—got by Imperial 2151—d. Sophia, (Herd Book, vol. 3, p. 537,) by Waverly 2820—g. d. No. 21, bred by Mr. Mason, and got by Satellite 1420—g. g. d. by Cato 119—g. g. g. d. by Charles 127—g. g. g. d. by St. John 572. This cow is a very excellent milker.

2. CATY—White heifer, calved July 17, 1844—got by Fairfax (49) 3754—d. Flora (1.)

3. CALF OF FLORA, (1) by Fairfax (49) 3754.

4. MOSS ROSE, vol. 5, p. 704—Roan cow, calved January, 1837, and imported in 1841—got by Barden 1674—d. Violet, by Young Colling 1843—g. d. Violet by Remus 550—g. g. d. Pink by Sedbury 1424—g. g. g. d. Beauty by Hollings 2131—g. g. g. g. d. Lingeroppper by Partner 2409, &c. See Herd Book.

5. COMELY—Light roan heifer, calved February 11, 1845, got by Young Leopard, (A.)—d. Moss Rose (4) 704.

6. CATHERINE, vol. 5, p. 153—Red and white cow, calved May 17, 1839, and imported in 1841—got by Mr. Johnson's Sir Robert 5181—d. Clara, by Reformer 2512—g. d. Chilton, by Don Juan 1923—g. g. d. by Lindrick 1170—g. g. g. d. by Sir Alexander, 591—g. g. g. g. d. by North Star, 459.

7. BLAIZE—Red and white bull calf, calved February 28, 1845—got by Young Leopard, (A.)—d. Catherine, (6) 153.

8. MATILDA, vol. 5, p. 629—White, calved March 26, 1834—got by White Jacket 5647—d. Heart, bred by the late Thos. Hollis, Esq. at Blythe, Eng., and by him brought to this country, on his removal for settlement in—

Heart is said to have been a very extraordinary animal, not only in symmetry and general appearance, but in union of valuable, high bred properties. Mr. H. was offered and refused \$700 for her, on landing in New-York.

Matilda took the first prize at the Fair of the Am. Institute in 1843. She has now in the yard with her, eight heifers and one bull calf with fourteen of the next generations, and whether considered as individuals or as a family, with reference to form or quality, they are alike remarkable for combination in each, and sameness in all.

9. SNOWBALL, vol. 5, p. 629—White cow, calved May 13, 1836—got by Carlos, (E.) 1787—d. Matilda (8) 629, &c.

10. NUN—Red and white cow, calved April 5, 1842—got by Leopard (D.) 4213—d. Snowball (9) 629, by Carlos, (E.) &c.

11. MELISSA, vol. 5, p. 629—Red and white cow, calved April 24, 1837—got by Carlos, (E.) 1787—d. Matilda, (8) 629, &c.

12. CAROLINE—Red and white cow, calved April 28, 1840—got by Leopard (D.) 4213—d. Melissa (11) 629—g. d. Matilda (8,) &c.

13. CORA—Red and white cow, calved March 6, 1841—got by Leopard (D.) 4213—d. Melissa (11) 629—g. d. Matilda (8) 629, &c.

14. MEG—Red and white heifer, calved June 28, 1841—got by Cato, (B.)—d. Cora (13) by Leopard (D.) 4213—g. d. Melissa (11)—g. g. d. Matilda (8) 629, &c.

15. TYRO—Red and white bull calf, calved January 10, 1845—got by Young Leopard (A.)—d. Melissa (11)—g. d. Matilda (8) 629, &c.

16. DAISY, vol. 5, p. 629—Red and white cow, calved March 18, 1838—got by Leopard (D.) 4213—d. Matilda, (8) 629.

17. NELL—Red and white cow, calved January 30, 1842—got by Northumberland (F.) 4596—d. Daisy, (16) 629—g. d. Matilda (8) 629.

At the State Fair, in 1842, Nell took the first premium in her class, and again did so at Poughkeepsie in 1844.

18. CALF of Daisy, (16) 629—by Fairfax (49) 3754.

19. DIANA, vol. 5, p. 629—Red and white cow, calved March 15, 1839—got by Leopard (D.) 4213—d. Matilda (8) 629.

20. TECUMSEH—White bull, calved March 17, 1844—got by Cato (B.)—d. Diana (19) 629—g. d. Matilda (8) 629.

21. BETTY—Red and white heifer calf, calved Dec. 5, 1844—got by Sultan, (C.)—d. Diana (19)—g. d. Matilda (8) 629.

22. SALLY, vol. 5, p. 629—Red and white cow, calved January 19, 1840—got by Leopard, (D.) 4213—d. Matilda (8) 629.

23. DUTCHESS—White cow, calved May 11, 1842—got by Fairfax (49) 3754—d. Sally (22) 629—g. d. Matilda (8) 629.

24. CALF OF (23)—by O'Connell (50) vol. 5, p. 704.

25. ROVER—Red and white heifer, calved May 30, 1844—got by Young Leopard, (A.)—d. Sally, (22) 629—g. d. Matilda, (8) 629.

26. CHARLOTTE—Red and white cow, calved November 16, 1840—got by Leopard, (D.) 4213—d. Matilda, (8) 629.

27. CALF OF (26)—by Fairfax, (49) 3754.

28. ADA, vol. 5, p. 629—Red and white cow, calved October 16, 1841—got by Leopard, (D.) 4213—d. Matilda, (8) 629.

29. CALF OF (28)—by Fairfax, (49) 3754.

30. JUDY—White heifer, calved January 28, 1844—got by Fairfax, (49) 3754—d. Matilda, (8) 629.

31. DUKE—Red and white bull, calved January 4, 1845—got by Fairfax, (49) 3754—d. Matilda, (8) 629.

32. APOLLONIA, vol. 5, p. 43—Red and white cow, calved January 26, 1835, and imported in 1838—got by Albion, 2965—d. by Red Star, 4911—g. d. by Chance, 1806—g. g. d. by Shipperly, 2619.

Appolonia is a very extraordinary milker, giving from 24 to 30 quarts a day for months in succession, and never drying before parturition without great care and effort.

33. LOUISA—Roan cow, calved January 28, 1840—got by Leopard, (D.) 4213—d. Appolonia, (32) 43.

34. BURLEY—Red and white heifer, calved May 11, 1844—got by Young Leopard (A.)—d. Appolonia, (32) 43. So far as dam and sire are concerned, this must be all that can be desired for the dairy.

35. SPLENDOR—Roan cow, calved May 7, 1836, and imported in 1839, vol. 5, p. 959—got by Symmetry, 2723—d. Pomona, (bred by Mr. Cattley,) by Bedford Junior, 1701—g. d. by Isaac, 1129—g. g. d. by Whitworth, 1584—g. g. g. d. by White Comet, 1582—g. g. g. d. by a son of Kit, 2179.

Splendor is a deep milker, giving from 24 to 30 quarts a day through the favorable season. She is the dam of Fairfax, (49,) 3754.

36. PEGGY, vol. 5, p. 959—Roan cow, calved April 4, 1842—got by Leopard, (D.) 4213—d. Splendor, (35) 959.

Peggy is now with her first calf, (Peggy 2d) and gives great promise of milk.

37. PEGGY 2d—Roan heifer calf, calved February 26, 1845—got by Fairfax (49) 3754—d. Peggy (36) 959.

38. RAMBLE—Red and white heifer, calved May 31, 1844—got by Young Leopard, (A.)—d. Splendor (35) 959.

39. CALF of Splendor (35,) by Fairfax (49) 3754.

40. ESTERVILLE, vol. 5, p. 329—Roan cow, calved November 13, 1841—got in England by Daniel O'Connell 3557—d. Esterville 329, (imported in 1841,) by Alfred 2987, (afterwards sold to the King of the French,)—g. d. Amethyst, by Prince of Northumberland, 4286—g. g. d. Young Amazon, by Crusader, 934—g. g. g. d. Amazon, by Sultan, 1485—g. g. g. g. d. Belona, by Mars, 411—g. g. g. g. d. Rolla, by North Star, 458. Bullied by Fairfax.

41. JENNY—Roan cow, calved June 12, 1841—got by Red Comet—d. Miss Scotson, alias Daisy, (bred by Samuel Scotson, at Toxteth Park, in England, and imported in 1840,) by Henwood, 4012.

Red Comet was out of Red Rose, by Young Albrin, (imported by Thos. Addis Emmet, of New-York,) by Harlem Comet—g. d. by Sir Martin.

42. JILT—Roan heifer, calved August 16, 1844—got by Sultan (C.)—d. Jenny (41.)

43. Calf of Jenny (41,) by Fairfax (49) 3754.

44. AURORA, vol. 3, p. 258—Roan cow, calved May 24, 1835—(imported in 1839,)—got by William, 2839—d. Adelaide, 258, by Young Rockingham, 2549—g. d. by Wellington, 2824—g. g. d. by Major, 2252—g. g. g. d. by Northumberland, 464.

Aurora is a great and rich milker.

45. TIMOUR—White bull calf, calved July 19, 1844—got by Fairfax (49) 3754—d. Aurora (44) 258.

46. Calf of Aurora (44)—by Fairfax (49) 3754.

47. DORA—Red and white cow, calved April 28, 1841—got by Leopard (D.) 4213—d. the imported cow, Princess, (bred by R. C. Lounds, Esq.) by Henry, 4008—g. d. Beauty, by Fitz Form, 2024—g. g. d. White Princess, (bred by Mr. Hines,) by Cupid, 938—g. g. g. d. Young Princess, by Lionel, 1171, &c. See Herd Book, vol. 5, p. 805.

48. MISS SMITH—Red and white cow, calved August 10, 1837—got by Leopard (D.) 4213—d. the imported cow, Susan, by Dutchman—g. d. Rosina, by Mr. Wetherell's North Star—g. g. d. by Old Comet. See appendix A.

49. FAIRFAX 3754—White bull, calved May 10, 1840—got in England, by Sir Thomas Fairfax, 5196—d. Splendor (35) 959, by Symmetry 2723—g. d. by Bedford, Jun., 1701—g. g. d. by Isaac, 1129—g. g. g. d. by Whitworth, 1584—g. g. g. g. d. by White Comet, 1583—g. g. g. g. g. d. by a son of Kit, 2179.

Fairfax took the first prize, as the best two year old, at the Fair of the State Agricultural Society in 1842; and the first, as the best bull of any age, at that of the American Institute, the same year.

He has not since been shown, but has been kept low, and at service. His dam, Splendor (35,) is a very superior dairy cow. His sire, Sir Thomas Fairfax, was got by Norfolk, 2377—d. Miss Fairfax, p. 509, vol. 3, Herd Book, by Fairfax, 1023—g. d. Lilly, by Young Warlaby, 2812—g. g. d. by Young Dimple, 971—g. g. g. d. by Snowball—g. g. g. g. d. by Layton, a son of Mr. Charge's grey bull, 872.

"Sir Thomas Fairfax" has taken the following premiums, viz: as the best year old bull, at Otley, in April, 1838, three (3) guineas; as the best two year old, at Leeds, in 1839, twenty sovereigns; (at the same time, he won a match of 5 guineas, against Mr. Tempest's celebrated bull, "Daniel O'Connell," which obtained the first prize, as the best bull of any age at the above meeting;) also, as the best bull of any age at the Yorkshire meeting, in August, 1840, the premium of 30 sovereigns; at the same time, beating that noted bull Clementi, in a match of five guineas each, and has never been beaten.

Most of the cows named in this Catalogue, are bullied by Fairfax, 3754.

50. O'CONNELL—Roan bull, calved January 11, 1842, vol. 5, p. 704—got in England, by Sir Peter, 5173—d. Moss Rose, 704, by Barden, 1674—g. d. Violet, by Young Colling, 1843—g. g. d. Violet, by Remus, 550—g. g. g. d. Pink, by Sedbury, 1424—g. g. g. g. d. Beau

ty, by Hollings, 2131—g. g. g. d. Lingeroppe, by Partner, 2409—g. g. g. g. d. Lady, by Hollings' bull, 2148—g. g. g. g. d. Lingeroppe, by Marsk, 418, &c.

APPENDIX.

A.—YOUNG LEOPARD—Red and white, calved October 5, 1838—got by Leopard, (D) 4213—d. the imported cow, Susan, by Dutchman—g. d. Rosina, by Mr. Wetherell's North Star—g. g. d. by Old Comet.

Susan was bred by Mr. John Singleton, at Elmsthorp, England, and imported in 1832, with the bull Copson. She was a very extraordinary milker, giving from 30 to 36 quarts a day, for several weeks in succession.

B.—CATO—White bull, calved May 3, 1842—got by Fairfax (49,) 3754—d. Diana (19) 629, by Leopard, (D) 4213, &c.

Cato took the first premium in his class, at the State Fair, in 1842, and also at the American Institute, the same year. He has not since been shown. Was calved after the papers were sent forward for the last volume of the Herd Book.

C.—SULTAN—Roan bull, calved July 24, 1842—got by Astoria, 3048—d. Flora (1,) (imported in 1839,) by Imperial, 2151—g. d. Sophia, vol. 3, p. 537.

D.—LEOPARD, 4213—Red and white spotted bull, calved in 1832; bred by Gen. Stephen Van Rensselaer—got by Ajax, 2044—d. Beauty, by Washington, 1566—g. d. Red Lady, by Washington, 1566—g. g. d. Panzy, by Blaize, 76.

E.—CARLOS, 1787—By Charles, 878—d. Galatea, by Frederick, 1060—g. d. Graceful, by Major, 2252—g. g. d. Graceful, by Comus—g. g. g. d. Graceful, by Denton, 198.

F.—NORTHUMBERLAND, 4596—Red and white bull, calved in 1839—got in England, by Prince of Northumberland, 4826—d. Apollonia (32) 43, by Albion, 2065, a son of Scipio, 1421—g. d. by Red Star—g. g. d. by Chance, 1806—g. g. g. d. by Shipperly, 5120.

IMPROVEMENT OF HORSES.

THE entire horse DIOMEDE, which received the first premium of the New-York State Agricultural Society, at the Poughkeepsie Show in 1844, will stand at the farm of the subscriber, near Leeds, in the town of Catskill, Greene county, N. Y., for the present season.

Diomede belongs to a stock particularly calculated for the carriage and road. Their uniformity in size, shape, and color, (bay,) renders them readily matched; and being large and handsome, with fine spirit and constitution, they readily command the highest prices.

All necessary care and attention will be given to mares sent from a distance, at very reasonable charges. Terms, \$10 the season. Particulars of Diomede's pedigree, &c., may be learned by applying to the subscriber.

WM. SALISBURY.

Leeds, Greene Co., N. Y., April, 1845.

TO WHOM IT MAY CONCERN, ESPECIALLY TO FARMERS AND HORTICULTURISTS—Sulphate of Ammonia, Sulphate of Soda, and Nitrate of Soda—These three ingredients are highly useful for forcing the crops, and for protecting the planted seed against the grub worm. Experience has shown that a fortnight may be gained in ripening and raising the grain; also, tomatoes, turneps, cauliflowers, &c., may be brought to perfection by using the above in a liquid state.

As regards the Sulphate of Ammonia, Professor Johnston says, in one of his lectures, that it exhibits a more marked effect upon the leguminous than corn crops, and upon the produce of grain than on the growth of the leaves and stem, which is owing to the sulphuric acid contained in it, and that it promotes the general growth of the plant, and makes the fields luxuriant, which is owing to the Ammonia.

The same may be said of the Sulphate of Soda and Nitrate of Soda. They are certainly the most useful of manures, and may be employed in a dry or liquid state; if the seed is steeped in a mixed liquid, the worm cannot attack it before the embryo is already sprouting; and by sprinkling once in 24 hours over the fields of vegetables, the leaves of the plants are nourished, and the vegetable stimulated to advancing to perfection. If applied in a dry state, and mixed in the proportion of 5 lbs. of sulphate of soda, and 2 lbs. of nitrate of soda, and 3 lbs. of ammonia, and thrown in heaps of about 30 lbs to the acre, wheat, rye, corn, potatoes, cabbages, turneps, rice, cotton, and similar fields, the crops may reasonably be expected to increase 50 per cent.

The following poisons have been improved and are confidently warranted effectual in every instance:

1. The Patchouly Compound, for dispelling moths and destroying their eggs in flannels, furs, hair seating, carpets, &c.
2. Rat Poison, for permanently eradicating rats without killing them on the spot, from houses, barns, ships, &c.
3. Bedbug Poison, in powder and liquid, the one as a preventive, and the other as a safe destroyer, without allowing them to return.
4. Fly Paper—for destroying flies and musquitoes.
5. Cockroach Poison, for getting rid of this obnoxious and disgusting vermin.
6. Compound Chem. Whale Oil Soap, to shield rose bushes, grape vines, trees, &c., from the worms and other insects.

The subscriber will confidently say that he can warrant all his preparations, having made lately decided improvements, and that he will for instance, surely clear rats from fields and barns with the greatest ease, and without the least detriment.

The only favor he asks, is to follow strictly the specific directions of the subscriber, who stands ready to give all necessary verbal directions, and to apply only personally to him, and not to any other

Dr. LEWIS FEUCHTWANGER,

60 Maiden Lane, New-York.

May 1, 1845—1t.

AURORA AGRICULTURAL INSTITUTE.

THIS Institution, recently opened, is located on a farm of over 200 acres, lying in and directly adjoining the village of Aurora, on the east bank of Cayuga lake, in Cayuga county, New-York, 16 miles from Auburn, by stage, and 12 miles south from Cayuga Bridge and the Auburn and Rochester Railroad, by steamboat direct, in summer.

Its design is to afford every facility for young men to make themselves thoroughly acquainted with the principles of Agricultural science, and their judicious application to practical husbandry; and particularly to afford young men from our large towns, the most favorable advantages for preparing themselves for Agricultural pursuits.

Terms \$150 a year, payable quarterly in advance. No person under fourteen years of age will, as a general rule, be received.

Pupils will be received at any time, and the course of instruction continued through the year without vacations, but permission of absence will be granted if requested.

Applications may be made to B. R. McIlvaine, 44 Great Jones st. New-York, to Rev. W. Roosevelt, 413 Rroome-st., and Hon. B. R. Wood, or the Editor of the Cultivator, Albany.

CHARLES C. YOUNG, A. M., Proprietor and Principal.

ALEXANDER THOMPSON, A. M., M. D., Lecturer on Botany, Geology, Agricultural Chemistry, &c.

DAVID THOMAS, Visitor and Adviser.

May 1, 1845—1t.

DURHAM BULL CALF AND HEIFERS.

THE subscriber will sell a Durham Bull Calf one year old 21st March 1844, a remarkable thrifty animal and good handler; when about 10 months old weighed 720 lbs. He was got by his prize bull Meteor. Also, a yearling and a two year old heifer, one got by Meteor, and one by the imported bull Duke of Wellington. Letters post-paid, will be answered.

GEO. VAIL

Troy, May 1, 1845—2t.

TO SPORTSMEN, &c.

THE writer (desirous of being at liberty to travel part of the year, and yet have his interests well looked to,) offers an opportunity rarely to be met with, viz: an interest in one of the most perfect and extensive stock farms, on and around which are game and fish in the greatest variety and abundance. The country is very beautiful in scenery, well wooded and watered. There is abundance of water power on and around the place. The climate is delightful and healthy, a desirable occupation and residence for an invalid.

The farm is already stocked with sheep, horses for breeding, &c. &c., but the number will be increased until there are at least (10,000) ten thousand sheep, and other stock in proportion, to which end improvements are in rapid progress.

The annual expense of keeping the animals is so low, that the profits are large; breeding ewes giving over one dollar and a half clear profit per annum.

The advertiser seeks an agreeable companion as partner in the above interests. Should this meet the eye of such who has taste for field sports and rural pursuits, he may learn further particulars by addressing, post-paid, the "Editors of the Cultivator," Albany.

May 1, 1845.—1t.

IMPORTED ENGLISH GRASS SEEDS, &c.

JAMES M. THORBURN & Co., have received by late arrivals from England, a variety of the most improved grass seeds, cultivated by the farmers of Yorkshire, Northumberland and Devonshire, and will be found well worthy a trial—among several sorts, are the following:

Cynosurus cristatus, (Crested Dog's Tail Grass)—Excellent for sheep, producing upwards of 6,000 lbs. to the acre—50 cts. per quart.

Festuca pratensis, (Meadow Fescue)—For horses, cattle and sheep, produces very early in the spring—25 cts. per quart.

Festuca loliacea, (Darnel-like Fescue)—Possessing all the valuable properties of Rye Grass, and few of its defects; its produce is larger; it springs earlier and improves by age; well adapted for meadows, which are periodically overflowed—25 cts. per quart.

Festuca ovina, (Sheep's Fescue)—Linneus affirms that sheep have no relish for hills and heaths that are destitute of this grass—37½ cts. per quart.

Poa nemoralis, (Wood Meadow Grass)—Its early growth in the spring, and its remarkably fine succulent and nutritive herbage, recommend it strongly for admission into the company of the superior permanent grasses—37½ cts. per quart.

Poa trivialis, (Roughish Meadow Grass)—Most valuable for moist rich soils, and sheltered situations; oxen, horses and sheep have a marked partiality for it—25 cts. per quart.

Poa pratensis, (Smooth stalked Meadow Grass)—Not less valuable than *P. trivialis*. Earlier in leaf, and will thrive with less moisture—25 cents per quart.

Also, 200 lbs. Madder Seed, crop 1844. \$1 per lb. The Tract of Gasparin on the treatment of Madder, gratis.

Multicole Rye.—A native of Poland, will grow in the usual soil suited to rye. Its produce is wonderful in light soils—12½ cts. per lb.

Spurry.—Well adapted for poor sandy soils, and very rapid growth—25 cts. per lb.—(See Report of Commissioner of Patents.)

White French Field Carrot.—Superior to all others. Mr. Hamilton of Vermont, last season raised 1200 bushels on half an acre, and found it superior to all other carrots for stock—\$1 per lb., 2 lbs. to the acre.

Essex Spring Wheat.—\$3.50 per bushel

Early Prince Albert Peas—ready in 8 weeks—50 cts. per quart—with every variety of Garden Seeds that can be procured.

JAMES M. THORBURN & Co

May, 1, 1845—1t.

15 John-street, New-York city.

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ADVERTISEMENTS inserted in the Cultivator, at \$1.00 per 100 words for each insertion.

NOTICE.

IT has been thought for a long time, and often spoken of by men in various parts of the country who feel interested in matters concerning agriculture, that suitable Ware Rooms for Machines and Implements of the most approved kinds, are much needed in this city.

In consideration of this fact, also well known to himself, the undersigned has concluded to open such Rooms in a central position, (No. 5, Burling Slip,) for the sale of Agricultural Machines and Implements of the most approved descriptions, on commission, and will receive samples of the same from any who feel disposed to have their inventions introduced to the public from this city.

The undersigned is also exclusive agent for making and vending the "Warren's Improved Portable Horse Powers and Threshing Machines," succeeding H. Bartlett, (successor to L. Bostwick & Co.) who retires on account of ill health.

Now on hand, Premium Plows, Cultivators, Straw Cutters, Portable Mills, Fanning Machines, Corn and Cob Crushers, &c. &c., wholesale and retail.

N. B. All orders for Implements of any kinds will be attended to promptly, also for seeds, &c.

JAMES PLANT,
May 1—It. 5 Burling Slip, New-York city.

PLOWS.

AT the Syracuse Agricultural Warehouse and Seed Store, can be obtained Delano's celebrated Diamond Plow made by Mr Howard Delano, of Mottville, for the sale of which, we are sole agents for this town. Price, \$6 for plain plow, and \$10 for the wheel, coulter and cleve. Also, a full assortment of the well known Massachusetts Plow, made by Ruggles, Nourse & Mason of Worcester. 300 bushels seed barley, 300 do. pure Marrowfat Peas, 100 do. Clover seed, 150 do. Timothy, and a general assortment of all the varieties of seed sown by the tillers of the soil; Cultivators, corn plows, Wheel-barrows, Churns, Cheese Tubs, Cheese Cloth, Hoops and Presses, Hoes, Manure, Hay and Barley Forks, Shovels and Spades; and a very great variety of articles appertaining to the interest of the husbandman. Orders promptly executed.

Syracuse, April, 1845.

FOSTER & NOTT.

AMERICAN Farmers Encyclopedia, price \$4—Skinner's Cattle Doctor, price 50 cents, and a variety of other works, for sale at the office of "The Cultivator."

SALE OF FULL BLOODED NORMAN HORSES.

THE subscriber having relinquished farming, will offer at public vendue, at his farm in Moorestown, Burlington county, New-Jersey, nine miles from Philadelphia, on Tuesday, the 20th of May next, his entire stock of NORMAN HORSES, consisting of two Imported Stallions, "Diligence" and "Buonaparte;" two Imported Mares—three full blooded Stud Colts, one, two and four years old—two full blooded Fillies, three and four years old—two Fillies by "Diligence," from a half blood Canadian Mare, three and four years old, and one Filly four years old, by "Diligence," from a well bred English mare, broke and kind to harness.

The undersigned deems it unnecessary to speak at large of the qualities of these horses, so much having been said of this particular importation, (which is believed to be the only one ever made to the United States,) in all the principal agricultural papers. In a few words, they are the Canada Horse, on a larger scale, combining the form, activity and hardihood of that well known race, with greater size and strength. "Diligence" has been a remarkably successful stallion; he has been exhibited at the Fairs of the Pennsylvania and New-York Agricultural Societies, where he was not entitled to compete for the premiums, but received the highest encomiums from the Committees. At the Fair of the American Institute, in New-York city in October last, he received the Silver Medal of the Institute.

It is expected that a large number of the colts of "Diligence" will be on the ground on the day of sale, some of which, no doubt may be purchased.

EDWARD HARRIS.

Moorestown, Burlington Co., N. J., March 15, 1845—2t.

ALBANY SEED STORE.

THE proprietor is now receiving from his seed growers, a full and complete assortment of American Garden Seeds, all of which are selected with care, being grown from the best varieties of vegetables to be found in the country; also European seeds, plants and flower seeds from the best establishments in Europe and America.

Fruit trees of all the choicest kinds furnished to order at the lowest market prices, and warranted true as represented. Agricultural and horticultural implements of American and European manufacture. Also, Root-Slicers, Corn-Shellers, Straw-Cutters, &c. Those who wish to purchase or examine are respectfully invited to call.

W. THORBURN, Seedsman & Florist.

March 1, 1846—3 t. corner of Broadway and Maiden Lane.

ADVERTISEMENT.

POUDRETTE of the best quality, prepared by the New-York Poudrette Company, may be had on application to the undersigned, No. 23 Chamber-street, New-York. Poudrette prepared by this company, was used in larger quantities in 1844 than during any previous season, and with very general success, as may be seen by reference to the numerous reports in relation to it now in my possession, a few of which may be found in the Cultivator for April. The price is, as last year, \$5 for three barrels, and \$15 for ten barrels, or thirty cents a bushel in bulk at the Factory. Orders by mail, enclosing the cash, will be as promptly and carefully attended to, as if made personally, by

D. K. MINOR,

April 1, 1845—2t. 23 Chambers-street, New-York.

PERUVIAN GUANO.

THE subscriber will keep constantly on hand for sale, in large or small quantities, the best quality of genuine Peruvian Guano. Price in single bags, weighing from 125 to 175 lbs., 2 cts. per lb. for half a ton to one ton,..... 24 " " over one ton to five tons,..... 21-8 " "

A. B. ALLEN,

March 20, 1845—2t. 205, Broadway, New-York.

PREMIUM EAGLE, SUBSOIL, AND OTHER PLOWS.

THE subscriber having been appointed sole Agent in this city, for the sale of the celebrated Premium Plows, made by Ruggles, Nourse & Mason, of Worcester, Massachusetts, now offers them for sale at the manufacturer's home prices. They are calculated alike for the Northern Farmer and Southern Planter, and embrace all varieties. Price from \$3.50 to \$11.50.

The great number of premiums which these plows have obtained at the most important plowing matches, and the universal satisfaction they have given wherever introduced, renders it unnecessary to particularise their merits. They are made of the best materials, are highly finished, and combine light weight and easy draft, with great strength and durability. Though the first price is higher than the common kinds, they do their work in so superior a manner, and with a draft so much easier for the team, that they are universally preferred where known. It has been repeatedly proved that a single pair of oxen, horses, or good mules attached to the Eagle plow, No. 1, in any reasonably friable soil, will easily turn a furrow of 6 inches deep by 12 inches wide. In addition to the above good qualities, being made of the best materials and highly finished, these plows last much longer than the common kind; they are consequently much the cheapest in the end.

SUPERIOR HAND AND HORSE CULTIVATORS. These are made at the same manufactory. Price from \$3 to \$6.50.

A NEW IMPROVED DRILLING MACHINE. This is calculated for sowing all kinds of seeds. Price, \$10.

A. B. ALLEN,

March 20, 1845—2t. 205 Broadway, New-York.

SEED STORE AND AGRICULTURAL WARE-HOUSE.

OUR Spring supply of seeds is now ready, and we shall be happy to receive orders for Field or Garden Seeds, of every description, Black Sea, Italian and Siberian Spring Wheat, Barley, Peas, Clover Seed, Timothy Seed, Seed Corn, Shaker and other Garden seeds, &c. Also, a full assortment of farming tools selected from the best manufacturers in the country. Hoes, Scythes, Forks, &c. cheap by the dozen.

E. COMSTOCK.

Rome, Oneida county, March 1, 1845.